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ABSTRACT

Presented are results of a project which reviewed and critically analyzed the research literature and produced a bibliography of 291 books, reports, and articles related to the mainstreaming of preschool handicapped children. It is explained that major project activities involved searching the literature, interviewing experts in early childhood education, and visiting local preschool programs. Discussed in the first half of the document are historical trends in the education of handicapped children, issues in early intervention and in early childhood mainstreaming, and problems in the research methodology. Summarized are considerations in developing an integrated early childhood program, and issues involved in a child's transition from such a program to an elementary school. Among conclusions reported are that the value of an intervention program depends on the degree to which that program focuses on the child's special needs, and that greater public financial support is needed. Recommendations are also made regarding census taking by the states, future policies of the Bureau of Education for the Handicapped, and research needs. The second half of the document consists of the bibliography (Many entries are abstracted), with author and subject indexes. (LS)

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Review and Implications of Research

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Wynne Associates

Final Report
Contract No OEC-74-9056

MAINSTREAMING AND EARLY CHILDHOOD EDUCATION FOR HANDICAPPED CHILDREN:

Review and Implications of Research

Suzan Wynne, Project Director
Linda S. Ulfelder
Gayle Dakof

January 1975

Division of Innovation and Development
Bureau of Education for the Handicapped
U.S. Office of Education
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Suzan Wynne, Project Director
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Gayle Dakof

III. INTRODUCTION

A. Statement of Purpose

Over the past few years there has been a growing tendency toward integration of handicapped youngsters into regular preschool, as well as into regular primary and secondary school programs. This trend toward "mainstreaming" affects hundreds of thousands of young children. Yet, what is ultimately at issue is the quality of education for all children. Mainstreaming is but one way of addressing the issue.

This review of research literature on integrating preschool, handicapped children into regular preschool programs was developed under Contract No. OEC-0-74-9056 with the Division of Research of the Bureau of Education for the Handicapped, Office of Education, U.S. Department of Health, Education and Welfare.

The U.S. Office of Education has identified assurance of equal opportunities for the handicapped as one of its priorities. To further this goal the Bureau of Education for the Handicapped has established five primary objectives for the 1970s. Three of these objectives are most relevant for our purposes:

- To assure that every handicapped child is receiving an appropriately designed education by 1980 (85% by 1978).
- To secure the enrollment by 1978 of 850,000 (85%) preschool, handicapped children in Federal, State and local educational day care programs.
- To assure that all handicapped children in the schools are served by trained personnel who are competent in the skills required to aid each child in reaching his full potential.

The Bureau estimates that there are seven million handicapped children, one million of whom are below the age of six.* Hundreds of thousands of these youngsters are affected by current legislation mandating early intervention for handicapped children under six in 35 states (see Section V, Table 1).

In view of the need to provide early intervention programs on a massive scale for our nation's handicapped youngsters, BEH has identified the integration of handicapped children into regular preschool classes as a potentially significant strategy for meeting this objective. The Bureau's Division of Research is developing a long-range research plan related to each of the major objectives and is identifying specific research tasks which merit immediate attention and support.

In line with these objectives and activities, the Bureau of Education for the Handicapped awarded Wynne Associates a six-month contract to identify, evaluate, and integrate existing and ongoing research, literature and data relating to placing handicapped children in the mainstream of regular preschool programs, and to generate hypotheses and researchable questions for more rigorous testing in future research. This document, written primarily for researchers and educators interested in the provision of education for young, handicapped children, focuses on the review and analysis of the research

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* Bureau of Education for the Handicapped. Better Education for the Handicapped, Annual Reports, FY 1968 and FY 1969.

literature on preschool mainstreaming in the context of the present range of preschool programs. "Mainstreaming" is the term used to describe the integration of handicapped children into regular classrooms. Consideration is also given to the integration of nonhandicapped children into programs for handicapped children, i.e. "reverse-mainstreaming."

The authors will attempt, however, to examine mainstreaming from the perspective of the larger purpose of intervention programs for handicapped children. Discussed here are the implications of research on the efficacy of programs for young handicapped and "disadvantaged" children and the reasons professional educators, researchers and policy makers give for favoring mainstreaming. These rationales will be examined in light of the available research evidence.

Mainstreaming is in increasing vogue for many reasons, some philosophical, some empirical, and some financial or political. These reasons are discussed in their historical perspective in a later section. Kreinberg and Chow (#239) provide insight into some of the pressures to mainstream in the following passage:

> At this time, the field of special education is undergoing upheaval because of pressures from state legislatures for educational accountability; from state and federal litigation against the exclusion of handicapped children from the regular classroom, and discriminatory IQ testing; and from the reduction in local and federal funding for special education. To these pressures are added the stresses that result from requiring teachers, who were trained as specialists, to function as generalists in the classroom.

Many prominent educators are encouraging the integration of special need children into regular classrooms. While mainstreaming seems to be a reality and shows all the signs of becoming an important part of the continuum of services to handicapped children, little is known about its effects on handicapped and nonhandicapped children. Researchers and practitioners are in the early stages of exploring the mainstreaming process and are attempting to discover what works and why. Limited available evidence points to the efficacy of mainstreaming handicapped, young children. Research findings provide indications of a corresponding lack of benefit from self-contained special education classrooms for such youngsters. Most of these studies, however, have been at the primary school level and, at this time, we know of no research that provides conclusive findings about the efficacy,or lack thereof,of mainstreaming preschool children.

The findings of existing research tend to be narrow; few generalizations can be made. The literature provides no clear understanding of the dimensions, variables and attributes of preschool mainstreaming, as practiced. Much of the research is poorly done. Very little of it relates directly to the concerns of administrators and practitioners. The comparative studies conducted thus far have been both inadequate and inconclusive, and there is little indication that ongoing research represents a substantial improvement over that already published.

There are, of course, good reasons why the research in this field is not better. A major one is that many of the variables and interactions most critical to the mainstreaming process are far from clear. Little is being done to improve the situation.

Another impediment to obtaining data lies in the fact that, as far as we have been able to determine, very few of the preschool programs funded by either OCD or BEH are currently collecting adequate data or are conducting useful internal evaluations on the efficacy of their mainstreaming efforts. The only comparative efforts being done seem to focus on the collection of descriptive information, rather than on program processes.

Key Terms

- The terms, "preschool", "early intervention" and "early childhood education" are used somewhat interchangeably throughout this document. Though "preschool" suggests a less structured form of programming than we believe most handicapped children require, we have used the term because of its greater simplicity. "Early intervention", as it is used here, generally refers to a structured program tailored to the needs of the exceptional child, though not excluding nonhandicapped children. We prefer the term, "early childhood education", but found it awkward to use and, consequently, the reader will encounter ECE as a substitute for the longer phrase.

- The terms, "mainstreaming" and "integrated", as used in this document, refer to the placement of handicapped (or exceptional, or children with special needs) and nonhandicapped children in a classroom for the purpose of educating them together. However, mainstreaming, as will be discussed more fully in Section VII, Part B , does not have consistent meaning to educators and since "integration" more nearly approximates their desired goal, that is the preferred term in this document. At the same time, we recognize that there may be confusion over this term since it has, for so many years, referred to racial integration.

B. Boundaries and Limitations

The original scope of this project was to search for, review and critically analyze published research literature relevant to the integration of handicapped preschool children into regular classrooms. After a thorough search uncovered only a handful of articles, essays and dissertations dealing specifically with preschool mainstreaming, we began to review the literature in a number of related areas such as:

- early identification,
- teacher attitudes and training,
- parent attitudes,
- social adjustment of special need children,
- labeling,
- self-concept.

In fact, we examined any material we could find that seemed likely to promote understanding of the intricacies of mainstreaming young children.

To enhance the usefulness of this document, we expanded the scope of the investigation, in collaboration with our Project Officer, to include 1) the rationale for preschool intervention and education for handicapped children; 2) the rationale and efficacy of preschool intervention and education with economically and culturally disadvantaged children; and 3) whether such intervention improved subsequent school performance. Examination of this literature has enabled us to present a more holistic view of mainstreaming in the context of programming for young, handicapped children.

Age-Related Issues

Our presumption throughout this report is that the variables related to mainstreaming are similar at the preschool and elementary school level. Although the years between the ages of three and six may create special problems and conditions, it makes good sense to permit more continuity in the child'd educational life, before and after first grade. Consequently, we have occasionally gone somewhat beyond the mandate of this contract; our suggestions and recommendations often apply not only to preschool children, but also to those in the primary grades.

Nature of Educational Research

The issue of research, while not directly in the scope of our contract, will be considered in this report. We were unable to deal with research in preschool mainstreaming without addressing some of the problems with educational research. There seems to be no concensus among researchers in education as to what constitutes acceptable research, except that everyone agrees that the present situation leaves a good deal to be desired. See Section VIII on Methodological Issues and Problems for a complete discussion of educational research.

Issue of Categorizing Handicapping Conditions

Although this issue is somewhat outside of the scope of this report, much of the literature we reviewed referred to the negative effects of labeling as an important rationale for favoring mainstreaming.

In the recently published reports, The Futures of Children and two volumes of task force papers entitled Issues in Classification of Exceptional Children, Dr. Nicholas Hobbs and the task force members performed a Herculean task in dealing with the complex issues surrounding classification.

In this report, we will not attempt to do more than to present a few of their conclusions in contrast to other points of view. We recommend that our readers refer to Hobbs' documents for a thorough and comprehensive review of the research on classification and labeling.

Child Development Theories

While many researchers stress the need for program operators to set clear, specific goals and objectives within a theoretical framework, a major problem in doing research in the area of early childhood education is that there is,as yet,no consensus among educators about the goals for preschool education. Most educators appear to believe that early intervention has value but the nature of the perceived value is still unclear. However, it is not within the scope of this report to provide support for any particular theory of child development. We will, however, attempt to tease out the implications that various child development theories have for 1) the kinds of programming that might be best for handicapped preschool children;and 2) mainstreaming efforts in a variety of preschool settings.

At this point, the reader is reminded that our contract was for six months of effort and we were, therefore, limited in the amount of coverage we could give to all of these topics.

However, we hope that this document proves useful for the researchers, practitioners and policy-makers for whom it is intended. We have tried to be as specific as possible as to the kinds of information that administrators need in order to more effectively mainstream young children with special needs. Some of the recommendations are presented in the form of questions for research. Some have been designed, we hope, to stimulate new ways of looking at research on old questions. Still others represent our admittedly biased attempts to provoke debate and discussion about how best to conduct research in educational settings.

IV. PROCEDURES

We reviewed several hundred books, reports and articles. Of these, 291 were selected for our bibliography (see Part II).

Most of the research literature on preschool mainstreaming and related topics has been neither very informative nor very well done. In an attempt to flesh-out the issues involved in this topic, we have had to rely heavily on personal interviews, anecdotal material and articles expressing views of opinion-makers in the field of early childhood education and development.

Advisory Panel Meetings

We had two meetings with our advisors. The first meeting, at the beginning of the project, focused on clarification of the issues involved in preschool mainstreaming, obtaining suggestions as to possible sources of information and on methods for analyzing the research literature. The second meeting, held toward the end of the project, was designed to crystallize some of the key issues discussed in this report.

Literature Search

The libraries searched for this project were those of:

- The Council for Exceptional Children (CEC)
- The National Education Association
- American University
- The George Washington University
- The Association for Childhood Education International (ACEI)

We searched the Education Index, CEC Abstracts, Psychological Abstracts, the 1968-1974 volumes of International Dissertation Abstracts, and computer runs on the subject from CEC, ERIC and the Clearinghouse for Early Childhood Education for relevant material.

Interviews and Conferences

Bureau of Education for the Handicapped. Throughout this project we maintained close contact with several people from the Bureau of Education for the Handicapped, particularly the Office of Program Development and the Handicapped Children's Early Education Assistance Program, which is responsible for the First Chance and Outreach projects.

Head Start and the Office of Child Development. We have also consulted with a number of people from the Office of Child Development involved in the 14 experimental Head Start programs for handicapped children, the Developmental Continuity Program, and a new program concerning early screening and needs assessment efforts.

Both the Project Director and the Research Methodologist attended a conference of the 14 experimental Head Start project directors, staff members, researchers from related projects, representatives from the Office of Child Development and the Bureau of Education for the Handicapped held in Vail, Colorado (August 19-21, 1974). The primary purpose of the conference was to permit the Head Start people to share information and ideas about their efforts to mainstream handicapped children. There were many indications that most of the programs were

determined to obtain success in mainstreaming and were employing a variety of creative means to insure that success. Unfortunately, only a few of the programs have engaged in research.

We also talked by phone to the project director of the Syracuse University group, commissioned by OCD to assess the Head Start mainstreaming effort, and we have reviewed their interim report submitted to OCD in the spring of 1974. Unfortunately, their final report had not been submitted in time for the inclusion of a review and analysis in this report.

Since pre-primary mainstreaming is a relatively new research area, and much of the work in this field is, as yet, unpublished or still in progress, we had to develop close links with the informal network of researchers, policy-makers and practitioners who are actively involved in this area. We contacted, in person, by telephone and/or by mail, a large number of people involved in the mainstreaming effort, including:

- Directors of BEH First Chance Programs that had been identified as integrating handicapped and nonhandicapped children;
- Directors of programs mentioned in articles, reports, or by researchers and practitioners as being involved in mainstreaming efforts;
- Directors of Head Start Programs involved with the 14 experimental mainstreaming projects, six of which also had BEH funds for doing training and information dissemination about early intervention and mainstreaming;
- Project administrators from CEC's Head Start Information Project.

In most of the responses to our inquiries, people were eager to share thoughts about their experiences in mainstreaming with us, but they were unable to offer much in the way of sound research date.

Conferences. In addition to the conference in Vail, the Project Director also attended and presented papers at the annual convention of the National Association for the Education of Young Children in Washington, D.C., and a conference cosponsored by the Maddox Foundation and the School for Contemporary Education for people dealing with young children in the Washington, D.C., Maryland and Virginia area. Both conferences enhanced our attempt to draw on the views of practitioners from a broad cross section of integrated programs.

Site Visits

Two staff members visited Chapel Hill, North Carolina, to observe several mainstreamed situations and to gain some insights from experienced practitioners and researchers into the area of preschool mainstreaming.

We met with Anne Sanford, who developed the Learning Accomplishment Profile, Andrew Hayes, from the Technical Assistance Development System (TADS), and James Gallagher, Director of the Frank Porter Graham Child Development Center, University of North Carolina

Local Preschool Projects. Because of the limitations of the research literature we bolstered our study by conducting on-site observations and interviews at 15 preschool programs in the metropolitan Washington, D.C. area.

The field work considered such things as:

- A general description of the programs:

  - nature of screening and diagnosis conducted
  - recruitment and eligibility
  - supportive services provided
  - staffing and training
  - characteristics of students
  - nature and extent of parent involvement
  - nature of curriculum (e.g., programmed, open, child-centered, custodial, etc.)
  - nature of the physical plant, including special modifications and equipment
  - nature of follow-up program, if any
  - source(s) of funds

- Handicapped children: types of handicaps, how each type is recognized and dealt with;

- Tone of classroom: activity level, noise level, teacher style (especially as style relates to handicapped as opposed to regular children);

- Activities involving handicapped children: constructive, directionless, group, individual, active, passive;

- Interactions between children: handicapped/handicapped, handicapped/regular;

- Interactions between teachers (or teacher-surrogates) and children: teacher-initiated behaviors toward children, responses of children to teacher, child-initiated behaviors toward teacher, responses of teacher to children.

Teachers provided us with their perceptions of the limitations and assets of their own programs and identified changes they felt were needed to correct deficiencies or to strengthen existing elements. Teachers were also encouraged to comment on the process of mainstreaming, their general philosophies of education and their experiences with handicapped children. Discussions also involved teacher recommendations

of research which is needed, from the practitioner's point of view.

Program administrators, teachers and parents actively involved in mainstreaming and in educating handicapped children were asked to help in defining issues and posing questions they felt should receive more attention from applied researchers.

Analysis of the classrooms and of interviews with experienced practitioners suggested many approaches to mainstreaming at the preschool level, and clarified several potential problems discussed throughout this document.

V. TRENDS IN THE EDUCATION OF YOUNG HANDICAPPED CHILDREN

As early as 1851, Samuel Gridley Howe encouraged the education of blind children within the regular public school system. It was thought that such an educational experience would enhance the social competency of both blind and seeing students. The idea was finally realized in 1900, when Hall opened the first special class for blind children in a Chicago public school (Hewett and Forness, #39).

After this breakthrough, there was little impetus seen in the special education field for several decades. Even as late as the Depression years, public schools were "neither philosophically nor financially prepared to offer educational programs" for children with special needs (Brenton, #67).

Post-war Years

Along with other movements interested in improved, expanded human services that had lain dormant during the Depression and the War years, the special education movement gained ground in the late 1940's. Many rather progressive special educators became concerned about the efficacy of special class placement. The literature of this period reflects these concerns, many of which deal with the same basic issues as does the current literature (attitudes, teacher training, social adjustment, parent participation). The most striking difference between the earlier and more recent literature is that the balance

has reversed. Today, most educators encourage the integration of special need children into the mainstream, while during the 1940's only a handful of progressive educators held this position.

Demands of some educators, parents and government officials seem to have encouraged research in the area, as well as an increase in communication and cooperation among those concerned with the issue.

In the 1950's, a series of Federal legislative provisions established small grants for research and the training of personnel in the education of children with special needs (Hewett, #39). It was during this period that research on the comparative effects of special versus regular class placement began to produce evidence that if special class placement for educable mentally retarded students has any advantages over regular class placement, they are slight and not particularly meaningful (Johnson, #110).

The 1960's

In 1961, President Kennedy established the President's Committee on Mental Retardation, comprised of leading professionals in fields related to special education. The committee's recommendations, coupled with the impetus from the growing movement, culminated in Public Law 88-164, which earmarked vastly greater training and research funds (Hewett, #39).

As the 60's wore on, there was a growing tendency for mothers of preschool youngsters, at all economic levels, to enter the labor market. Many of the War on Poverty programs encouraged this movement toward economic self-determination ("workfare rather than welfare"). Consequently, public and private day care and nursery school programs rapidly developed in an attempt to meet the growing public demand.

At the same time, partly as a result of the growing awareness of parents' rights fostered by the Civil Rights movement, the War on Poverty, and the general tenor of the times, parent groups began to bring pressure on the courts to ensure that their handicapped children would no longer be excluded from public education. As courts and state legislatures began to respond more favorably to parental demands, school systems, which were already facing increased financial pressures on a number of fronts, desperately began searching for ways to provide services to the handicapped children they had been excluding.

Lloyd Dunn's article, "Special Education for the Mildly Handicapped--Is Much of It Justifiable?", published in Exceptional Children in 1968 (#87), set off a chain reaction in the education community. Although Dunn was by no means the first to make the point that children from low-income areas who had been labeled educably mentally retarded seemed to do as well in regular classes as in special classes, his stature among educators and the timing of this article were factors in the study's impact. The research literature from 1968

to the present reflects the attention this topic has received from both researchers and decision-makers. Rhetoric has flowed freely and hot debates rage through the literature about the issues raised by Dunn.

While this controversy was developing, much national attention was focused on Head Start and its attempts to provide a compensatory education for children variously described as culturally deprived, educationally handicapped, economically disadvantaged, etc. In real terms, many of the children being served in Head Start programs were from backgrounds that made them susceptible to being labeled mentally retarded and placed in self-contained classrooms for children called "educable mentally retarded." These were children with whom Dunn (#87) had been most concerned in his article:

> A better education than special class placement is needed for socioculturally deprived children with mild learning problems who have been labeled educable mentally retarded.
>
> ...we must stop labeling these deprived children as mentally retarded. Furthermore, we must stop segregating them by placing them into our allegedly special programs.
>
> We are not arguing that we do away with our special education programs for the moderately and severely retarded, for other types of more handicapped children, or for the multiply-handicapped. The emphasis is on doing something better for slow-learning children who live in slum conditions.

Recent Developments

At one time, the study of exceptional children was neatly subdivided into discussions of the blind, the deaf, the mentally

retarded, the physically handicapped, the gifted and the emotionally disturbed. The field has been broadened to include specific learning disabilities and hyperactivity, which has resulted in many more thousands of additional youngsters falling within the scope of "exceptional children." At the same time, less attention is being paid to the specific kind of disability and more to the fact that each of these children, regardless of disability, is trying to cope with his unique and individual learning styles and problems (Baldwin and Baldwin, #55a).

Researchers who had been urging early intervention for "handicapped" children began to point enthusiastically to visible changes in individual children in Head Start, and began pushing for legislation to provide early intervention specifically for handicapped children.

The result of this interest is reflected in the congressional mandate in 1972 which states:

> The Secretary of Health, Education and Welfare shall establish policies and procedures designed to assure that not less than 10 per centum of the total number of enrollment opportunities in the Nation in the Head Start program shall be available for handicapped children (as defined in paragraph [1] of section 602 of the Elementary and Secondary Education Act of 1965, as amended) and that services shall be provided to meet their special needs.

Compliance with this mandate has resulted in the enrollment of approximately 4,000 handicapped children in Head Start programs.

Programs and Positions of the Bureau of Education for the Handicapped

In September 1968, Congress enacted the Handicapped Children's Early Education Assistance Act, which provided funds for demonstration

programs, insisted that such programs (referred to as First Chance Network) be geographically disbursed, mandated the involvement of parents, and ordered widespread dissemination of the results. Under the Act, programs were to be coordinated with one another and were to be evaluated in order to demonstrate their effectiveness. Appropriations under the Act have steadily increased, an indication of Congress' support of the legislation and its products. (For a more extensive review of the Act and resulting projects, see Ackerman and Moore, #189a.)

In a 1970 article in American Education, Dr. Edwin Martin, Associate Commissioner for the Bureau of Education for the Handicapped, outlined the Bureau's desire to promote early intervention programs for handicapped children (#129). Another article by Dr. Martin appeared in Exceptional Children in 1972, in which he discussed the values of individualization and behaviorism in the context of needed educational changes that would foster the mainstreaming of handicapped children (#130).

In a letter sent out during August 1974 to about 100 First Chance network programs, BEH asked if they were attempting to provide an integrated experience. Fifty-five percent of the programs responding by mid-December were integrating handicapped and nonhandicapped preschoolers on a full or partial basis.

Present State Legislation and Program Status

Most states have some type of mandatory legislation requiring that at least some portion of their handicapped children be provided

an education. Eight states have mandated developmental services from birth; one offers services beginning at age two; eight begin at age three; four begin at age four; and 12 begin at the age of five (see chart). Unfortunately, these mandatory requirements often have been ignored and, in virtually every state, many children in need of special education services have been unable to obtain them (Abeson, #53a).

Table 1: Educational Services for Children with Special Needs, According to Age Eligibility*

Beginning at:	Birth	Age 2	Age 3	Age 4	Age 5
	Iowa	Virginia	Alaska	Connecticut	Arizona
	Kansas		Florida	Delaware	Colorad
	Michigan		Georgia	Oklahoma	Hawaii
	New Hampshire		Illinois	Tennessee	Maine
	North Carolina		Massachusetts		Minneso
	Oregon		Rhode Island		Missour
	South Dakota		Texas		Nebrask
	Vermont		Wisconsin		Nevada
					New Jer
					New Yor
					Ohio
					West Vi

* For more complete information on type of mandate, date of passage, compliance dates, handica other qualifications, see the Council for Exceptional Children's "State Statutory Responsibi Education of Handicapped Children," August 21, 1974.

Services for Children with Special Needs, According to Age Eligibility*

Age 2	Age 3	Age 4	Age 5	Age 6
Virginia	Alaska	Connecticut	Arizona	Alabama
	Florida	Delaware	Colorado	Arkansas
n	Georgia	Oklahoma	Hawaii	California
pshire	Illinois	Tennessee	Maine	District of Columbia
arolina	Massachusetts		Minnesota	Idaho
	Rhode Island		Missouri	Indiana
akota	Texas		Nebraska	Kentucky
	Wisconsin		Nevada	Louisiana
			New Jersey	Montana
			New York	New Mexico
			Ohio	North Dakota
			West Virginia	Pennsylvania
				South Carolina
				Utah
				Washington
				Wyoming

formation on type of mandate, date of passage, compliance dates, handicapping conditions and
, see the Council for Exceptional Children's "State Statutory Responsibilities for the
pped Children," August 21, 1974.

VI. ISSUES IN EARLY INTERVENTION

A. Overview

> ...the experience of a preschool program is vital for the successful assimilation of handicapped children into the "normal" world, and in many instances may prepare them for public school experience.
>
> Lewis, #16

The overwhelming majority of the authors reviewed for this document agree that early intervention is important. While it is difficult to prove the efficacy of early intervention for handicapped children, recent research results tend to support the belief that early and continuous intervention can lead to the prevention of more serious difficulties later. Piaget (#49), Martin (#201), Weininger (#183), Adkins and Walker (#1), Kirk, in Rosenblith and Allinsmith (#119), and Caldwell in Jordan and Dailey (#72) are only a few of the authors we reviewed who represent this point of view.

The following passage from Siegel (#52) summarizes the predominant point of view among educators and child development specialists:

> Inadequate diagnosis, treatment and psychological management in early life often cause problems of intense magnitude in later life. Exceptional children can generally be treated more effectively in the early stages and will more readily attain their optimum at maturity if they receive proper education and treatment services at the earliest possible time.

In talking about her own classroom situation, a teacher in a school for hearing-impaired children in Maryland commented that there

is a definite difference in the abilities of the hearing-impaired who have been in the infant program and those who came in "fresh." Our own observation of her classroom confirmed that those who had been in the infant program of the county schools had better language and social skills.

Much of the recent interest in early childhood education arose from the psychoanalytic viewpoint that there is a critical period of time for intervening with a specific remedial technique and that, if the critical period is passed or by-passed, the opportunity for maximum learning related to that period is lost. Related to this theory is what is commonly referred to as the "magic years" theory, which holds that the adult personality is partially fixed by the time an individual is five or six years old;* thus, "careful attention to the development of growth-fostering environments during this early period is essential" (Caldwell, #73). Adkins and Walker (#1) refer to Bloom's research findings that suggest that 50 percent of one's development occurs before the age of four. Although there is much controversy about Bloom's conclusions, it is generally accepted that the first few

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* Benjamin S. Bloom, Stability and Change in Human Characteristics, New York: John Wiley and Sons, 1964.

years of life have a tremendous impact on the individual's adult personality configurations and intellectual capacity.*

Further support for this theory can be found in the developmental studies of children who were reared in different environments. Bettye Caldwell (#73) summarized these studies by stating that the period between 18 months and 3 years seems to be the time at which differences in perception and cognition appear between children from culturally enriched and culturally deprived backgrounds.

Adkins and Walker (#1) say that:

> While we cannot precisely pinpoint the initial periods of learning readiness, there is a period between three and four years of age which roughly coincides with Jean Piaget's "pre-operational state, **during which organized and systematic stimulation, through a structured learning program, might best prepare the child for the more formal and demanding structure of the school.

Other experts in the field of early childhood development and education believe that early intervention may be beneficial, but do not believe that a child can learn either more or more efficiently during his or her first few years of life as a direct result of early intervention.

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* For an overview of the complexity of the theories underlying early childhood education, the reader is referred to the following books: Colvin and Zaffiro (#33); Jordan and Dailey (#236); Stanley (#53); and S. J. Braun and E. P. Edwards, Eds., History and Theory of Early Childhood Education, Worthington, Ohio: Charles A. Jones, Co., 1972.

** See Piaget, 1952, The Origins of Intelligence in Children.

Edward Zigler (#210), former head of the Office of Child Development at HEW and currently a professor at Yale University, states his belief that "the first few years of life do not represent some magic period during which a child can be innoculated against any and all negative experiences to follow."

Bereiter, in Stanley (#57), amplifies this viewpoint:

> The data on long-term effects of preschool intervention are disillusioning but not, to me at least, discouraging. The illusion that they serve to dispel is that there is some magic in the early years of intellectual development, such that a little difference there will make a lot of difference later. What we seem to be finding instead is that a lot of difference there may just possibly make a little difference later...some things can be taught to young children and some cannot; some of the things that can be taught will prove useful later, and some will not; what will prove useful later is not determined by some innate chain of development but by the actual course of real-life events.

Robert McCall (in #261) amplified this viewpoint when he described the case of a child who had been isolated in a darkened room since infancy. After being discovered at the age of 6 1/2, she was provided with intensive therapy for less than two years and was described as "affectionate, creative, imaginative, social, and of normal intelligence." McCall goes on to say,

> What happened to the supposed indelible effect of the first six years? I do not wish to imply that the first six years of life are not important. Of course they are. Moreover, some skills can be taught more easily during that period of a child's life, and he may even be ready or susceptible to learn those skills best during that period. What I am objecting to is the implication that after you have reached your sixth birthday it is all over and mental and personality characteristics are essentially established. I believe people are much more plastic and adaptable over most of their life span than we have supposed.

On the other hand, the Cradle School Project initiated at the University of Wisconsin-Milwaukee, by Heber and Garber, has been the focus of much hopeful attention by proponents of early intervention. The project focused on children from low-income areas whose mothers have IQ's of 75 or less. Such children have a very high risk of being identified as mentally retarded. Typically, their IQ and performance scores show a steady decline from early childhood through the first years of school. The idea was to prevent mental retardation through a program of early, intensive and continuous intervention. Mothers (or prospective mothers) in this group were identified through a screening process.

A total of 40 low-income, low-IQ mothers with newborns were selected, and half assigned to the Experimental group, the other half to a Control group (no special enrichment activities).

A paraprofessional was then assigned to each Experimental family and began working with child and mother, in the home, as soon as five days after birth. The home-based portion of the program continued for the first two years. At two, the children entered a day care group, at three a nursery school program, and at four, a pre-kindergarten. Special enrichment activities were provided throughout the project, and the children were tested regularly on a number of language and performance tests (they will be tested through age seven, after completion of first grade).

In a review of the findings from the first six years of the project, Heber et al* reported that, while the IQ scores of Experimental and Control group youngsters were identical at 12 months, there was a 30 point difference in mean Stanford-Binet scores at 66 months (5 1/2 years). The average IQ for the Experimental group was approximately 115 (ranging up to 135). Similar striking differences were noted with the other measures used. Clearly, the results, thus far, strongly support the belief that early and continuous intervention can have a marked effect.

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* R. Heber, H. Garber, et al. Rehabilitation of families at risk for mental retardation (16-P-56811/5-08). Progress report of the Rehabilitation Research and Training Center in Mental Retardation, University of Wisconsin, December, 1972.

Alternatives to Group-Based Intervention

Still other educators who support the general concept of early intervention for handicapped children are skeptical about the value of providing intervention in a group setting. Shirley Cohen (#261) points out that, "Handicapped children may have difficulty imposing or seeing organization in a rich environment...which may be related to problems often reported of handicapped children becoming over-stimulated in what we consider good preschool environments."

Marion Blank, in Stanley (#53) also discusses some of the potential drawbacks in school based intervention:

> The group-based structure of nursery school [may help] protect the child in his efforts to avoid learning. Because so many other children are present, the child has opportunities for "appropriately" completing an activity even when he is totally unaware of the cognitive content of the task. This can occur through imitation, habit, or rote associations. For example, many children happily join in group singing by uttering nonsense syllables in place of the words of the song. The presence of fifteen other voices that are singing the appropriate words easily disguises the child's failure. The traditional group-based nursery school situation is thus perfectly designed to perpetuate the avoidance of learning in those children who have the most difficulty in learning.

The remarks by Cohen and Blank reflect aspects of the theory that some children, particularly those who are very young, slow in developing or who have severe emotional problems should be provided with a home-based type of intervention. There are several variations of home-based intervention:

- Training parents to teach their own children in the home setting.
- Combining classroom instruction for part of the day or week with some type of home-based instruction for the remainder.

The originators of the Wisconsin based Portage Project are skeptical as to the benefits very young children can derive from a group education and socialization experience. Their project, since replicated in a number of communities and expanded to include school based intervention, was primarily designed to provide home-based teachers to teach parents of handicapped youngsters, birth through four, task oriented teaching techniques based on the principles of behavior modification.

Heber and Garber's Cradle Schools Project, described earlier in this section, combines a home-based program for high risk infants and toddlers with a sequential program of school based intervention for children two through five.

We suggest that the question of where early intervention should occur is still largely a matter of philosophy and personal preference and we can see no way of evaluating the little research that has been done on this issue.

B. Research with Handicapped and Disadvantaged Children

Research with Handicapped Children

Our search for materials dealing with the efficacy of intervention efforts with handicapped children resulted in the identification of a substantial body of literature. Unfortunately, time did not permit a thorough examination of studies on programs for both disadvantaged and otherwise handicapped preschoolers. Since the research relating to disadvantaged children appeared to focus on a broader range of program variables, we concluded that concentrating our efforts on this literature would have greater relevance for our primary task of examining research literature on mainstreaming.

Much of the research on programs for young, handicapped children deals with specific handicapping conditions and the kinds of programming that are most likely to be beneficial to them. While these considerations are certainly related to our present investigation, time did not permit more than a cursory look at this body of literature.

Our primary sources for this investigation were the bibliographies compiled by the University of Illinois at Urbana/Champaign (#266, #267, #268 and #269) and the Exceptional Child Bibliography Series, published by the Council for Exceptional Children.

An examination of findings from a broad cross section of studies with handicapped children revealed that the critical variables of programs did not differ significantly from the research findings presented in the discussion of Research with Disadvantaged Children.

Following are the results of our analysis of the nature of the literature dealing with efficacy of intervention for the various handicapping conditions.

Visually and Hearing Impaired: There were a large number of studies concerning young visually and hearing impaired children. The major thrust of these studies was on narrow intervention techniques or technologies designed to remediate the specific disabilities. Such material was clearly beyond the scope of this report.

Orthopedically Handicapped Children: The few studies identified as relating to intervention for orthopedically handicapped children revolved around issues such as physical layout of the classroom, specific intervention techniques, problems of curriculum, goal setting and parent participation.

Emotionally/Behaviorally Disturbed Children: We identified thirteen studies of programs for children with emotional problems. These studies focused on behavior modification procedures, individualized instruction, specific therapeutic techniques and parent participation.

Learning Disabled Children: There were numerous studies concerned with children who have a specific disability. These studies are characterized by the concentration on issues surrounding early screening procedures and specific strategies for prevention and remediation of learning deficits.

Mentally Retarded Children: In many instances, we were unable to determine whether research was dealing with children who were organically retarded or on the other hand who had been handicapped by environmental conditions. Many studies begun in the mid to late 1960's serving educable mentally regarded youngsters were, in point of fact, from low income families. We were able to locate very few studies that dealt with children who clearly were organically retarded.

However, one example of such a study is described in a document on early childhood intervention programs in the state of Illinois (#208). This program, developed by Merle Karnes at the University of Illinois, called Precise Early Education of Children with Handicaps (PEECH), serves young children with an average of three handicaps per child, and a mean IQ of 60. The purpose of the project is to remediate or ameliorate problems so that these children can function more effectively in the home, in school, and in the larger society. Although the handicapped children made tremendous gains in the preschool program, they did not become part of the mainstream population. Trainable mentally handicapped children became educable mentally handicapped children; children with IQ's of 40 made gains to IQ's of 60.

Summary

We recommend that BEH support one or several reviews of research designed to examine existing literature concerning the varying kinds

of intervention provided for children under six years of age with a variety of handicapping conditions. The literature should be drawn together to determine:

- What further research is needed;
- What the existing research suggests for program development and design strategies; and
- What the findings suggest regarding both the integration of handicapped children into regular preschool programs, and the integration of normal children into programs for handicapped children.

Research with Disadvantaged Children

Much of the research on questions of the efficacy of early intervention has involved children from low-income areas who had been labeled mildly retarded on the basis of IQ tests, standardized on middle-class populations. A basic tenet of Head Start is that scores of such youngsters are often more a function of their socioeconomic position and cultural circumstances than an indication of organically-based retardation, and that early intervention can enhance their opportunities for a successful school career. In the following discussion of this view, we have attempted to synthesize the findings and conclusions of a number of researchers insofar as they are relevant to early childhood education and mainstreaming for handicapped children.*

Implications of Head Start Research

Our review of studies that examined the short- and long-term effects of Head Start on disadvantaged children revealed intense controversies among researchers.

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* Our conclusions for this investigation have primarily been drawn from research performed by:

Hodges, McCandless and Spicker (#231, 232), cited in Stearns (#259);
Sprigle, cited in Stearns (#259) and Colvin and Zaffiro (#33);
Weikart, cited in a number of sources in addition to his own article in Stanley (#53);
Karnes (#114, 115), cited in Stearns (#259) and Stanley (#53);
Blank, in Stanley (#53);
Caldwell, cited in Stearns and her own analysis of her findings (#71, 72);
Gray and Klaus, cited in Stearns (#259) and Hodges, McCandless and Spicker (#231, 232);
Bereiter, cited in Stanley (#53).

Most studies done in connection with determining the efficacy of Head Start have been of two general types:

1. The first has focused on the question of how the scores on IQ and achievement tests of former Head Start enrollees who are now in public schools compare to the scores of other groups of children (with varying preschool experiences). The Westinghouse study, completed in 1969, is perhaps the best-known example of this type.**

2. The second has focused on the styles of regular (i.e., "traditional") and various experimental programs and has attempted to determine which program strategies and curriculum models lead to the most consistent and long-lasting changes in achievement and IQ scores. A few studies have attempted to identify the key variables within the various models that seem to enhance program success.

Criticisms of these studies focus on two major issues:

1. The use of IQ and performance tests as a way of evaluating programs not designed to produce cognitive gains may not be a fair measure of success; and

2. Many of the Head Start children were still going to mediocre primary schools, still living in poor environments; expecting a couple of years of preschool enrichment to wipe out the effects of the rest of a child's life is overly optimistic.

The short-term results of Head Start studies of both types suggest that traditional approaches which characterize most Head Start programs and, indeed, most preschool programs, have been less successful in producing cognitive gains than have any of the experimental models. Specifically:

1. Students who had been in traditional programs showed greater short-term gains in IQ scores than did children who had remained at home.

** Westinghouse Learning Corporation. The impact of Head Start: an evaluation of the effects of Head Start experiences on children's cognitive and effective development. Ohio University, 1969.

2. Students who had been in experimental Head Start programs showed greater short-term gains than did traditional program students.

At first glance, these findings suggest that curriculum type and strategy are critical factors in a successful program -- one that produces an increase in IQ score. However, in all but a fraction of the studies, the initial positive gains attributed to Head Start "washed out." After several years of elementary school, the control, traditional and experimental groups all tested at about the same IQ and performance levels.

A number of investigators involved in this type of research developed structured curriculum programs that they believed would have a positive effect on the cognitive development of disadvantaged children. When tested, however, most students also suffered from "wash out."

Weikart claims somewhat more success in identifying some critical variables that seem to insure a greater measure of success in obtaining and sustaining long-term performance levels. In his now classic and thrice-replicated investigation begun in 1967, Weikart incorporated three curriculum models into the Ypsilanti Perry Preschool Project: 1) a traditional child-centered program; 2) a cognitively-based program derived from Piaget's theory of intellectual development; and 3) a program using Bereiter and Engelmann's task-oriented language training curriculum. Children were randomly assigned to one of the three curricula and tested on a variety of measures at the start of the program and at

various times thereafter. The measures included three IQ tests: the Stanford-Binet, the Leiter International Performance Scale and the Peabody Picture Vocabulary Test. The curriculum models appeared to have equal success in raising the IQ scores of the children on a short- and long-term (several years) basis. Weikart concluded, therefore, that the curriculum model itself was not the critical factor accounting for intellectual enhancement.

Karnes, in Jordan and Dailey (#115), said that:

> Contrary to Weikart's findings, most studies comparing structured programs with a traditional model have found that structured, cognitively based programs with an emphasis on language development have the greatest impact on the intellectual functioning and academic progress of the children.

Both Karnes and Weikart identify characteristics of programs that appear to account for success in their respective studies. Their findings differ significantly only in that Karnes includes specific curriculum components, whereas Weikart does not.

Karnes (in Jordan and Dailey, #115) summarizes her findings and those of others relative to successful program characteristics in the following way:

- A carefully defined approach for teaching young children, with a strong theoretical orientation.
- A mode of operation which includes daily allotments of time for continuous inservice training, curriculum development, daily planning and critiquing of instruction, a high adult-child ratio (one to five), and supervision.
- A curriculum for the children which attends to individual needs and fosters the development of (a) cognitive language; (b) motivation to learn; (c) self-concept; (d) social skills; (e) motor skills, and (f) information processing.

- ...Other important considerations of successful programs seem to be: feedback directed to the child as to the appropriateness of his responses, reinforcement of learnings, provisions for repetition and overlearning, and concern for helping the child transfer learnings. Consideration must also be given to providing appropriate instructional materials and equipment to carry out the intent of the program. Involvement of the family in the education of the young child is also felt to be a component of a successful program.

Weikart's summary of findings on the characteristics of a successful program follows:

- a clear rationale for the programs that provided a framework for classroom operation;
- team teaching;
- supervision by an experienced teacher, focusing on goals;
- weekly planning, and daily review and revision by teachers;
- all teachers were highly involved and committed;
- expectations for student performance were maintained at a high level;
- staff communicated frequently, well and with mutual respect;
- home visits by the teaching staff and active involvement by the mothers;
- heavy use of language in the classroom.

Clearly, as Weikart himself has pointed out, the Hawthorne effect has a great deal to do with his results. Unfortunately, while these effects appear to be highly desirable in promoting the success of a program, there are no clear research findings to suggest how they might

be built into programs on a permanent basis. As Weikart said, in Stanley (#181):

> ...the current compensatory preschool projects all tend to support one specific conclusion: experimental projects in which researchers have direct control of the curriculum, the operation of the project, and the research design seem to offer potential for immediate positive impact in terms of their stated goals...Preschool experience can make a difference for disadvantaged children. Unfortunately, I am speaking only of special situations.

Findings from Weikart's and other investigations are generally supported by formal and informal observations by researchers and program operators from programs serving young handicapped and children in self-contained and integrated settings.

C. Educational Implications of Handicapping Conditions

Learning and developmental problems are associated with all handicapping conditions. Some are related to intellectual functioning, some to behavioral and social functioning, some to motor development, and some to a combination of these factors.

There are two major issues associated with determining the educational implications of handicapping conditions. First, the physiological and psychological effects of the specific disabilities on the learning processes must be known. Second, there must be methods or instruments to assist in assessing the nature of the child's disabilities to a degree that permits educators to make appropriate educational decisions. In a systems sense, all of the issues discussed in this section are interdependent, and each new level of refinement in understanding one aspect of an issue permits greater refinement across all of them. For instance, on a very simple level, a piece of research that pinpoints the cause and effect of a particular disability should permit the refinement of diagnostic tools which, in turn, permits the development of materials designed to remediate the particular disability.

Probably the most obvious example of this deficiency in research-based information can be seen in the syndrome commonly referred to as "learning disabilities." The following passage from Wepman, Cruickshank, et al, in Chapter 11 of Hobbs (#39b) summarizes the state of the art

in research-based understanding and diagnosis of these disorders:

> General terms such as "minimal brain dysfunction" and undefined "learning disabilities" have no consistent meaning and no value as a basis for the development or the application of corrective methods...If order is to be imposed on this confusion, there must first be acceptance of the fact that the population of children involved is heterogeneous. Then criteria must be established whereby the appropriate professional discipline can reach a reasonably mutual understanding as to what a child's problems actually are...
>
> The lack of clear definition of this category of handicap has not only created problems in the control of special education funds; it has also vitiated much unfocused educational, psychological, and medical research. The inconsistent results obtained in much of this research are a consequence of the great heterogeneity of this population and the fact that research samples drawn from an ill-defined population can be expected to differ widely merely by chance.

This same state of affairs exists, though to a less chaotic degree, in the diagnosis and classification of disorders known as "intellectually handicapping conditions," "mental retardation," and "mentally handicapping conditions." There are, of course, many reasons for this fuzziness in classification, but a discussion of them is beyond our present scope. Nicholas Hobbs' recently published three-volume series entitled The Futures of Children and Issues in the Classification of Exceptional Children (in two volumes) deals exhaustively and excellently with the problems and ramifications of diagnosing handicapping conditions

A reflection of the lack of agreement among the various groups of professionals who diagnose and educate handicapped children is the varied opinions found in the literature about the nature of and the

extent to which curriculum changes would have to be made in regular school classrooms, Some educators believe that few special considerations or curriculum changes are necessary for children with handicapping conditions; others feel that it is important to identify the specific impairment and to treat the deficiency by direct remediation within the context of a highly structured individualized program. We mention this discrepancy not to draw conclusions about the "correct" position, but merely to highlight a conspicuous difference of opinion. In the meantime, administrators and teachers make decisions about the kind of curriculum to present to handicapped children, with little certainty that "the pill fits the illness."

The Practitioner's Need for Translated Information

Despite the fact that much research has been directed toward identifying these factors more specifically, educators frequently cite the need to understand more about the disability states, the optimal time for providing educational intervention, and the specific form the intervention should take.

As Yule (#29) said, teachers are "worried by their own lack of knowledge about the significance of the disability to the child...what is likely to be involved in admitting such a child to the group or how most appropriately to plan for him if he is admitted."

Adkins and Walker (#1) point out, "There is an urgent need for the related fields of medicine, neurology and psychology to become the allies of education in a determined effort to pinpoint disability and to prescribe for early remediation."

The document authored by Sherrick, et al, edited by Swets and Elliott (#256), and published in 1974, represents a significant attempt by a group of behavioral scientists to review research relating to the way handicapped children learn across a number of dimensions such as sensory processes, visual perception, cognition, and so on. The authors have identified areas where further research is needed and have provided much information for teachers of handicapped children, albeit in rather technical language. While this document was primarily written for psychologists in training, much of the information relates specifically to the implications that handicapping conditions have for classroom instruction.

Other authors, like Kirk (1972)* and Hewett (#39), deal with the physical, psychological and social characteristics of children with a variety of handicapping conditions. However, their focus is on educating school-aged children, and not on the additional complicating developmental factors associated with educating preschool-aged children.

It would seem a logical next step for BEH to support reviews similar to the one just cited, but with an eye to the needs of the classroom teachers at the preschool level. We have concluded that, in setting research goals for the next five years, BEH should have as a priority, the synthesis and dissemination of existing research information on the implications that characteristics of the various handicapping conditions have for educational planning and services.

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* S. A. Kirk, Educating exceptional children (2nd ed.). Boston: Houghton Mifflin Company, 1972.

Indeed, as discussed in some detail in Section VII, Mackie (#276), Blackman (#265), Lee (#261), and others have suggested the training and use of translators or interpreters, whose job would be to relate the operations, variables, and functional relationships found to be important in the basic research to corresponding processes and variables in the classroom.

VII. ISSUES IN EARLY CHILDHOOD MAINSTREAMING

A. Overview

Over the past few years there has been a growing tendency to integrate handicapped youngsters into regular preschool, primary and secondary school programs. This trend toward mainstreaming, literally, affects millions of children. The reasons given by educators and policy makers for favoring mainstreaming handicapped children cluster around a few key issues, some of which have been discussed in Section V, Trends in the Education of Handicapped Children, and some of which will be dealt with in this Section.

Research at the Elementary and Secondary School Level

Although this report does not deal directly with most of the research on the efficacy of mainstreaming (since the research primarily focuses on elementary and secondary school aged children), we have examined a large number of articles dealing with the efficacy of mainstreaming, as can be seen in Part II of this report. With few exceptions, the research in this area suffers from methodological problems that render much of it virtually useless.*

Most of the views about mainstreaming held by its proponents are based on philosophical and political considerations rather than on hard data. Indeed, it is often difficult to read what little research literature has been done without tripping over the biases of the

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* See Section XI for a detailed discussion of methodological problems generally found in this body of literature.

researcher. Unfortunately, much of the research literature we reviewed has been done with an eye toward "proving" that mainstreaming works or does not work (usually the former). At best, the research evidence suggests that a mainstreamed setting is at least as beneficial to mildly handicapped children* as a self-contained setting.

It is important to emphasize that research into these issues has not been able to substantiate conclusively that mainstreaming is a "good thing."

Much of the research has focused on variants of these major issues:

1. the effects of labeling children as handicapped on their self-concept and on the attitudes of parents, teachers and peers;
2. the relative benefits for handicapped children of self-contained and integrated settings on school performance, IQ level, and learning of desirable behaviors;
3. the relative benefits of the two settings on the ability of former students to obtain and hold jobs and otherwise function in the community.

Preschool Mainstreaming

We do not know how much of the research just discussed is generalizable to preschool aged children since there has been no

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* Educable mentally retarded children make up the bulk of the research subjects.

systematic attempt to study this issue. However, we suggest that the issue of mainstreaming for preschool children is not now subject to the same kinds of intraprofessional struggles and that trying to determine whether self-contained or integrated settings are better for small children might simply create a round of studies as inconclusive for preschool programs as the existing studies have been for elementary and secondary level school programs. Indeed, the development of a group of advocates for self-contained classrooms has not built up for preschool programs as it has for upper level programs. This is actually an advantage for those favoring mainstreaming, since there seems to be little resistance, on the part of early childhood education specialists, to the concept of mainstreaming.

Eligibility for Mainstreaming

On the other hand, there seems to be a lack of agreement on the standards to be used in determining whether or not to mainstream particular children. Many program operators with whom we spoke indicated that after conducting a thorough review and assessment of each applicant's educational needs, they declined to accept certain handicapped children into their programs. Generally, those with "more severe or disruptive" kinds of handicaps were not accepted into regular preschool programs, but definitions of what constitutes a "severely handicapped child" vary widely.

On the other hand, there seems to be general agreement among advocates of mainstreaming that while each situation should be

evaluated individually, the more severe the handicapping condition(s), the more special are the services required, and the less likely that integration will be "successful." Unfortunately, the research does not provide clear guidance to educators and diagnostic personnel responsible for making placement decisions and recommendations. Similarly, descriptive materials from program operators who had experience in only a single mainstreamed setting, had little value since the judgements were usually based on particular children entering a unique classroom situation. Two recent publications, one commissioned by the Bureau of Education for the Handicapped, and the other by the Office of Child Development (see #3 and #23), attempt to assist program operators in making better screening decisions.

The major issues pertaining to mainstreaming for older children are also relevant for children six and under. However, since the research into these issues is inconclusive for older children and almost nonexistent for young children, we are able to do little more than present the major rationales educators give for favoring mainstreaming. Note that some of these reasons are based on common sense and others on wishful thinking, but in no case, have any of them been researched conclusively.

Rationales for Mainstreaming

Those who strongly advocate mainstreaming contend that only the severely handicapped should be excluded from efforts to foster the education of both handicapped and nonhandicapped children within the

same classroom. Blatt (#13) points out that, "...unless the child has such extraordinary needs which cannot be met in the regular classroom, s(he) should live in ordinary communities and attend ordinary schools in ordinary classes."

A second reason for mainstreaming is that it can improve the delivery of educational services to nonhandicapped children. Most children have a need for special attention and services at some point in their lives. If schools are designed for mainstreaming, there will be a greater opportunity for more individualized programs and diagnostic teaching for all students, hence, it will be easier for schools to be more attentive to the special needs of all children.

A third reason many educators favor mainstreaming is that major benefits of an integrated program can be derived from the interactions and friendships that develop between handicapped and nonhandicapped children. In this kind of situation, handicapped children have opportunities to model socially desirable behaviors of other children, learn how to relate to others and are better able to develop a realistic self-concept.

Further, mainstreaming tends to keep teachers in touch with what normal two-to-five-year-old children are doing. The teacher working only with "special" children may lose perspective on what is and is not appropriate behavior and skill achievement for a given age.
A related issue is that larger class size in a regular preschool class promotes independence whereas the teacher in a smaller, self-contained

situation is more likely to be overly concerned with the day-to-day progress that each child is making.

Many educators contend that mainstreaming also offers many benefits to nonhandicapped children. It provides children with the opportunity to learn and to play with children who are different and, hopefully, will prevent the development of stereotypes about people with various handicapping conditions.

Reservations about Mainstreaming

Negative reactions and feelings about mainstreaming largely revolve around the concern that the handicapped child will not develop a healthy self-concept about himself because he will always see himself as different. The other major concern is that either the handicapped child takes up too much staff time or that his special needs are ignored and he becomes lost in the general hub-bub of the busy preschool classroom.

Results from the Syracuse University interim report on the progress made with mainstreaming young, handicapped children into Head Start programs suggest that, for the most part, integration has been successful. Our own interviews with Head Start program operators and the enthusiasm displayed by the program directors of the 14 experimental projects at the Vail, Colorado Conference in August 1974 lead us to agree with the Syracuse University assessment. The enthusiasm of the staff people and parents that we interviewed from preschools in the Washington, D.C. metropolitan area would certainly suggest that mainstreaming has great potential. We say this with the reservation that much more needs to be known about mainstreaming.

Financial Considerations

One reason often given for placing young handicapped children into the mainstream is its potential as a cost-saving device. We attempted to locate data which would either prove or disprove this hypothesis. Unfortunately, little in the way of hard data on costs and cost-effectiveness exists. This lack of reliable data has added to the confusion about what is a cost-effective administrative plan. There are those who claim that a good integrated program is more cost-effective than a segregated one, and naturally there are those who believe that the opposite is true.

Unfortunately, at this point, the only conclusion we can make is that the cost-effectiveness of mainstreaming has not yet been adequately tested.

Head Start

The legislative mandate to educate handicapped children within Head Start has a provision for an annual report to Congress that deals with cost considerations. We will examine the costs in Head Start as a representative for the broader issue of financial considerations for all integrated preschool programs.

In fact, the only available information that directly relates to the cost effectiveness of mainstreaming at the preschool level is the Syracuse University (#13) report on mainstreaming within Head Start.

This report concludes that they are unable to offer anything but the most tenuous data on the cost-effectiveness of placing handicapped

children into the mainstream of Head Start programs because of two factors:

1. Budgets indicate little evidence of special costs for the handicapped, but these costs do exist, although they are somewhat hidden. They include:

   - realignment of personnel assignments;
   - additional amount of volunteer time needed for the handicapped children;
   - hiring new staff as a result of normal turnover, but new staff selected because they are better trained (therefore more expensive) to work with handicapped children;
   - much of the inservice training sessions focus on issues related to working with handicapped children.

2. The mandate is not being fully implemented:

   - the number of children who would need services is not great and enrollment has not changed much;
   - the majority of identifiable handicapped enrolled are "mildly involved."

Considering these two factors, Syracuse stated that, at the time of their examination of the issue, "extra costs for servicing the handicapped are minimal." However, this in no way constitutes an answer to the question of what costs would be if "appropriate services" were made available to "significantly handicapped children" (Syracuse, #13).

The staffs of Head Start programs were able to identify areas which need more funds:

- staffing -- more staff members are needed because the handicapped children require an extraordinary amount of staff time;

- training -- need pre-service training specifically directed to educating handicapped children within the mainstream;
- instructional materials, equipment, supportive services (Syracuse, #13).

In Summary

The lack of any reliable data on costs has added to the general confusion about mainstreaming. Some educators are concerned that administrators have rushed into mainstreaming because of its potential as a cost-saving method, i.e., one way of meeting the legislative mandate to provide education for young handicapped children. They contend that any well-designed programs within the mainstream should be at least as costly as the self-contained classroom (Karnes, Sabatino, Braun, personal communication; Beeler, #4; McCarthy, #46).

As Beeler (#4) states:

> Mainstreaming would require more money, more teachers and more commitment than most of our communities have yet allocated for education.

Indeed, research results have shown that for children who show signs of having some type of impairment in cognitive and intellectual functioning, a highly structured, goal-oriented, systematic program has greater potential for maximizing the child's capabilities and enhances the likelihood that (s)he will be able to participate more fully in a regular elementary school setting.

However, as a former staff member of the Day Care and Child Development Council of America has pointed out, programs of this type

tend to have a higher per pupil cost ratio than most regular nursery school programs. While the financial factor must be an important consideration in developing strategies for mainstreaming, it should be emphasized that when we consider the costs of providing long-term, indeed life long, remedial services, the costs for providing good early intervention are minimal.

Self-Concept and Social Adjustment: Importance of Peer Interactions

A key argument in support of integration involves two interrelated concepts, modeling and peer reinforcement, both based on the principles of behavior modification propounded by Bandura* and others.

The modeling concept holds that observation and imitation of peers who have greater competence, whether social, academic or physical, can help to increase a handicapped child's own competence and, therefore, his self-esteem (Allen, et al, #1a; Devoney, et al, #8; Glass, #99; and Hartrup, #105). The peer reinforcement concept suggests that nonhandicapped children, in addition to serving as models for the handicapped, can serve as direct social reinforcers and, in constructively handled situations, increase the level and quality of social interactions of children having difficulties (Guralnick, in an interview; Hartrup, #105; and Pinkston, #151).

On the other hand, one of the most frequently mentioned concerns about mainstreaming was that nonhandicapped children would model undesirable behaviors of handicapped children. There is some research on this subject but, again, the children studied were all over six years of age. In any case, the findings were inconclusive and the research designs all seriously flawed.

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* A. Bandura, Principles of behavior modification. New York: Holt, Rinehart and Winston, 1969.

Peer Rejection

The most common arguments against integration of handicapped with nonhandicapped children is that the handicapped children might be teased, harassed or ignored by their classmates, or that the handicapped children would compare themselves unfavorably with their nonhandicapped peers.

The Syracuse University (#13) interim report on the assessment of the Head Start mainstreaming effort points out that no incidents were observed or reported by teachers in which special-need children were harassed or made fun of by other children.

Caldwell (#72), in her work at Kramer School, Little Rock, Arkansas, found that:

> Little children are not so prone to isolate and segregate on the basis of any characteristic, whether it's the developmental level that a child has reached, his skin color, behavior patterns, or whatever. They have much more of the ability to accept one another than do older children and adults.

Others have made similar observations. Weininger (#183) notes that preprimary school children tend to be more accepting of their peers' difficulties in learning. He hypothesizes that these children empathize more easily because they are still so close to their own early experiences with learning new academic skills.

On the other hand, several of the teachers and educators we interviewed pointed out that small children are not bias-free, whether inherently or because of cues picked up from their environment, and they must be taught to accept the deviant behaviors and/or appearances of others. One example of this was demonstrated at the Forest Grove School Program for the Hearing-Impaired in Montgomery County, Maryland. The hearing children were afraid of the equipment worn by the hearing-

impaired children in their integrated class. Their fears were gradually relieved by the teacher's careful demonstration of how the microphones and earphones worked, and of the fact that these aids would not "hurt them."

Rejection by peers seems related to negative behaviors of handicapped children themselves, particularly aggressive ones (MacMillan, et al, #128; Baldwin and Baldwin, #55a; Johnson, #110), and to children's fear of the unknown and the unfamiliar.

In her review of the research on peer acceptance in nursery schools, Moore (#142) found that a large majority of children in a group will have ongoing friendships with at least one or two others in the group. Her concern was about two kinds of children -- those who avoid social interaction and peer relationships (rejecting or ignoring friendly overtures), and those who want to establish friendships but go about it in ways that distress their peers. These children need help before their negative social patterns become entrenched.

A frequently expressed concern about mainstreaming is that handicapped children who are not accepted by peers or who have difficulty keeping up with the other children might develop negative attitudes about themselves and could either withdraw or develop destructive social interaction patterns. While this situation is possible with any child, the likelihood of such difficulties arising is much greater for a handicapped youngster.

A related concern is that if the mainstreaming experience is a difficult one, the consequences might be worse for all concerned than if no mainstreaming had taken place. Such a situation might create negative, deeply-entrenched attitudes and stereotypes on the part of both handicapped and nonhandicapped children.

The Teacher's Role

The teacher sets the tone for how the children in any class interact with one another. The teacher's attitude toward the handicapped children and their specific handicaps greatly influences their social adjustment.

Since it is often difficult for preschool students to generalize their experiences from one situation to another or to "put themselves in someone else's shoes," social competency must be taught by direct intervention. Relying on spontaneous interactions usually is not sufficient (Allen, et al, #1a; Devoney, et al, #8).

One of the programs we visited was the Montgomery County (Maryland) Program for the Hearing-Impaired, directed by Dr. Edna Monsees. Eight children with no hearing impairments were integrated with the eight hearing-impaired children two afternoons each week. It was early in the year and the teacher (Ms. LaPorta) pointed out that the hearing-impaired children had become quite "groupy" and tended, when left to their own devices, to exclude the normal children. The observer saw this happening during the free-play period, but when the teacher seated the children alternately (hearing-impaired, then no hearing impairment)

around the table to use the clay, the number of verbal and physical interactions increased dramatically as they all shared and talked together comfortably, each in his own way.

The literature provides several suggestions for helping children develop and maintain positive social interactions:

- o Structured play, such as described in the anecdote above, to provide behavior modeling for the handicapped children (Devoney, et al, #8);
- o Pairing of lower functioning with higher functioning children in structured ways for small group activities or tutoring (Chaires, in Johnson and Blank, #272; Beery, #32; Glass, #99);
- o Role-playing and dramatic play for older preschoolers;
- o Discussion groups, such as the "Magic Circle," which focus on making the children aware of thoughts, feelings and actions, and are designed to develop self-confidence and skills in interaction and communication.

Methodological Note

There is considerable controversy as to the feasibility of making meaningful assessments of the social interaction patterns and self-concepts of young children. Stearns (#259) argues that few researchers have yet overcome the difficulties of adequately measuring the feelings of three-to-five-year-old children.

In recent studies, sociometric tests have been used at the pre-school level, but results have been inconsistent and unreliable (see Moore, #142; and Lawrence and Winschel, #122).

Although Iano, et al (#103), found that educable mentally regarded elementary school children, as a group, received lower sociometric scores than did the "normal" students, as a group,

there was considerable overlap between the two groups, and many of the EMR's were not rejected or isolated. These kinds of data, though interesting, are of no help in determining the reasons why specific children are rejected and others are not.

The best research approach with this age group (and others) would be systematic, direct observation of social interaction patterns, to tease out the many complex variables. As Baldwin and Baldwin (#55a) point out, "there are all too few carefully systematic studies of the actual interpersonal behavior of handicapped people."

Concluding Comment

In this section we have attempted to identify and explain the major "mainstreaming" issues related to self-concept and peer acceptance. It is clear from our work that the questions raised far outnumber the issues explained. The questions raised include:

- What characteristics (behaviors, appearance, skills, deficiencies) of a child are related to his being rejected? Accepted?
- What effect do teachers' attitudes toward handicapped class members have on the degree to which the handicapped children are accepted?
- How does the self-concept of children with various special needs evolve? When do children become aware of their differences and/or deficiencies? Their attributes? Do the answers vary greatly from child to child or condition to condition?
- Does popularity (i.e. number of friends) mean anything to three, four or five-year-olds? Or, is having one or two friends, or even no friends, congruent with a positive self-concept?
- What is the long-range effect of preschool integration on the attitudes of nonhandicapped children toward handicapped children?

- When a child is truly unique in the integrated classroom (i.e., either the only handicapped child, or the only child with a particular handicap), does he feel a sense of isolation and a loss of self-esteem? Under what circumstances? What can teachers and peers do to alleviate the child's feelings?

B. Approaches to Early Childhood Education Mainstreaming

We have found that mainstreaming can mean very different things to different people. The definitional conflicts concern the ways in which integration is achieved. In this section, we attempt to classify the different types and styles of mainstreaming that are either discussed in the literature or are actually being implemented in preschool classrooms.

There are two major strategies of integration:

1. "Mainstreaming," where the handicapped children are integrated into regular preschool classes (the "mainstream" of education);

2. "Reverse mainstreaming," where nonhandicapped children are integrated into classrooms that have been designed for handicapped children.

Within these strategies there can be varying degrees of integration, from partial to complete. At this point, there is no evidence to favor either strategy or any particular degree of integration within a strategy. Most possible variations exist, but there have been no comparative studies of their effectiveness.

Partial Mainstreaming

The common feature of this type of setting is that handicapped children are educated separately, either as a group or individually, for a significant part of the school day or week in one or a number of nonintegrated settings such as:

- self-contained classrooms;
- resource rooms designed/used for handicapped children;

- special resource teachers or other professional personnel on or off the school site;
- home-based tutoring.

Selection and placement in a partial mainstreamed setting may be random or systematic, but are more likely to be the latter.

There is a wide variety of curriculum and teaching styles represented within this type of setting.

This setting serves most of the children who are in transitional home or school-based programs.

Complete Mainstreaming

The common features of this type of setting are that all of the children in the program are involved in the same activities when they are in school, and that special resources (rooms, services, personnel) are generally available to all children in the program.

- Selection and placement can be random or systematic.
- Attendance for handicapped children can be full or part-time.

All types of curriculum strategies and teaching styles are represented in these various settings.

Transitional Programs

All of the service delivery systems mentioned below have one common goal: to prepare the handicapped child for inclusion in an integrated setting on a complete or partial basis. These programs and services focus primarily on equipping the child with the self-help skills and behaviors that will permit him/her to function in a mainstreamed or reverse mainstreamed setting with less need for the regular teacher's special attention.

The delivery systems can take a number of different forms:

- regular programs that have one or more self-contained classrooms in which special need children spend all or part of their time;
- programs that have provision for home-based teachers or tutors who work with handicapped children and their parents at home;
- programs specially designed to serve as transitional, self-contained situations.

In Summary

Although there is no research evidence that suggests which of these strategies has the most potential for providing a successful integrated program, our hypothesis is that "reverse mainstreaming" is more likely to provide design features that would account for the special needs of exceptional children. As we have mentioned previously, many of the First Chance programs funded by BEH have been specifically designed and planned for handicapped children, sometimes for a particular handicapping condition and sometimes for a number of handicapping conditions. Over half of these programs are also serving nonhandicapped children, with apparent success. Obviously, further research is needed to evaluate the relative success of the two approaches.

C. Review of the Literature on Early Childhood Mainstreaming

Our search of the literature turned up only 31 articles which deal specifically with preschool mainstreaming. Only four of these are research studies. The others describe particular programs or curriculum models, or advocate particular policies regarding preschool mainstreaming.

Research Studies

Two of the studies made intergroup comparisons of the effects of different kinds of early intervention on the development of mentally retarded children.

Kirk's (#14, 1958) study of the efficacy of "Early Education for the Mentally Retarded" compared children in regular preschools and institutional preschools with each other and with control groups receiving no treatment. He found, in his sample, that preschool did have a positive effect on those mentally retarded children who had some degree of psycho-social or environmental deprivation, but had less impact on those with purely organic impairment. He also found in this longitudinal study that the advantages of early intervention "washed out" in elementary school. The significance of this study is diminished, however, because of its sampling bias (the use of pre-established rather than randomized groups for comparison, and a small sample size) and insufficient control for the effects of such intervening variables as curriculum.

Spollen and Ballif's (#26, 1971) study, on the "Effectiveness of Individualized Instruction for Kindergarten Children with Developmental Lag," dealt with essentially the same issue, but it randomly assigned the subjects to treatment groups and used a large sample of middle-class children with "developmental lag." Their results showed insignificant difference between the eight groups of children receiving individualized instruction in special classes and those in six integrated regular kindergarten classes. They also tentatively conclude that the small change in both groups was because the "lag" of these middle-class subjects was organic rather than psycho-social.

Taken together, despite methodological problems, these two studies suggest the following findings:

- Early intervention has a positive effect;
- The effect of early intervention is greater when the child's "retardation" or "lag" is more psycho-social than organic;
- Regular class placement is at least as good as special class placement.

The methodological issues that these studies bring up include:

- The results of intervention on groups of children are measured, as opposed to measuring changes within individual children (intergroup as opposed to intra-individual comparisons, and product-testing as opposed to process-testing);
- The difficulty in controlling intervening variables or their multiple interaction;
- Sampling bias -- the need to randomly assign pupils to treatment groups when comparing special versus regular class placement;

- The need for longitudinal studies to gauge the durability of effects;
- The importance of the "Hawthorne effect" (that being in an experimental group may have a greater effect on performance than the treatment itself has) as a confounding factor;
- The difficulty of replicating studies because of sampling bias and insufficient "operationalization" of definitions, curriculum, goals, etc.

The two other research studies that dealt with preschool mainstreaming (Allen, et al, #1a, 1972; and Devoney, et al, #8, 1974) were of a different kind. Instead of making intergroup comparisons of the effect of a program model on the intellectual development of groups of handicapped children, these two dealt with specific behaviors and charted the changes of each child in terms of a specific behavior.

Allen, et al's (#1a, 1972) "Julie: Integration of Normal and Handicapped Children in a Behavior Modification Preschool: A Case Study" and Devoney, et al's (#8, 1974) "Integrating Handicapped and Non-Handicapped Preschool Children: Effects on Social Play" were both concerned with the social interactions of handicapped children, and whether or not a 50-50% integrated situation with non-handicapped children would increase or improve the level of social interaction of the handicapped children. Both studies used time-sampling methods to count the number of interactions during a play period.

Because both are based on the research-service model, sampling bias is not a problem. Each is a case study: the first one, one of a single emotionally disturbed child; the second one, one of a group of seven EMR's. Both used the subjects as their own controls.

These two studies deal with the issue of the efficacy of mainstreaming from a different perspective than did the intergroup comparison studies by Kirk (#14, 1958) and Spollen and Ballif (#26, 1971). They do not fit the traditional research model, but they are particularly relevant for their demonstration of:

- The research-service model;
- The use of direct observation of behaviors and the effectiveness of particular kinds of intervention;
- The need for direct intervention to increase social interaction;
- The significant effect of modeling behavior of normal children.

In terms of methodological issues, these studies illustrate:

- The use of intra-individual comparisons as opposed to group comparisons;
- The use of process-testing: modifying behaviors and techniques as needed and measuring the results instead of measuring only the final results (product-testing);
- The use of the Hawthorne effect to advantage: every child is part of the experimental model;
- Having each child act as his/her own control;
- A research method which provides both evaluative data and planning methods in one model;
- The use of direct observation as a data-collecting instrument.

Other Literature

Most of the rest of the literature on preschool mainstreaming could be called evaluative in the more general sense in that it was

based on the synthesis of the experience of the authors. However, their conclusions and judgments were arrived at in a more intuitive than rigorously systematic way. Like Dunn's (#87, 1968) remarks, they "give more evidence than proof of the value of mainstreaming" (MacMillan, #127, 1969).

The fact that there are only four "quantified" studies is not, however, an indictment of the more descriptive articles on "mainstreamed" preschool programs that make up the majority of the literature. In fact, at this early stage of research, qualitative descriptions can be very helpful in suggesting appropriate hypotheses for future studies, as well as serving as encouraging examples, if not replicable models, for other programs.

However, this material is too sparse and variable to allow much generalization beyond suggesting the following:

- All favored some variation of integration;
- There is a trend toward a more structured curriculum than that found in the traditional nursery school;
- There is a strong emphasis on the importance of individualizing instruction to meet the needs of each child, whether handicapped or not;
- The methods and techniques used to meet the children's needs vary tremendously;
- There is not one "ideal" system of integration, nor one ideal degree of integration, nor one ideal curriculum;
- The ability and attitude of the teacher appears to be the most important factor in the success of an integrated program;
- Most of the programs consider parent involvement and/or cooperation to be important.

Several of the articles deal with general strategies and suggestions for teachers and administrators. These articles include:

- Beeler (#4, 1973): "Integrating Exceptional Children in Classrooms" describes the requirements of the ideal classroom for emotionally disturbed preschoolers, strongly advised for normal children as well.

- Burke (#6, 1970) strongly advocates that "Children With Visual Disabilities" be mainstreamed into regular preschools, and uses a case study to emphasize the point. She also stresses the importance of family involvement in the child's preschool experience.

- Christopherson (#7, 1972) makes administrative notes on why she thinks mainstreaming "The Special Child in the 'Regular' Preschool" has worked smoothly at her own laboratory preschool for 10 years now, emphasizing the importance of the teacher's feelings and expectations, a full picture of the child and daily support to the teacher, the child and the family.

- Luterman and Luterman (#17, 1974) discuss the requirements of "Integrating Deaf Children into a Hearing Nursery," including specific suggestions for teachers.

- Pollack and Ernst (#21, 1973) give suggestions for dealing with hearing-impaired preschoolers in "Learning to Listen in an Integrated Preschool." They stress the importance of an active role for the teacher and the parent.

- Swap (#27, 1974) gives "Guidelines for Assessment" of the progress of children with special needs in regular preschool classes, basing her model on the developmental stages of Erikson and the academic stages described by Hewett. The characteristics of special children and guidelines for dealing with them are described.

- Tait (#28, 1974) describes strategies and relationships involved in "Teaching the Blind Child in a 'Regular' Kindergarten."

- Yule (#29, 1963) advocates regular "Kindergarten for Children With Handicaps" in terms of self-image, peer relationships and the need for strong supportive services. She also describes a model program she observed in Denmark.

Several authors describe their own programs, some in a format that facilitates replication (see *'s):

- Bailey, Klein and Sanford (#2, 1974)*: "Model for Resource Services..." describes operationally the Chapel Hill Training-Outreach Project, in which handicapped children are integrated into regular preschools with intensive supportive resource services. This book is actually a manual for setting up such a model.

- A Plan for Itinerant Educational Consultant Services for Preschool Visually Handicapped Children (#21, 1971) describes a demonstration project for mainstreaming visually handicapped children and discusses the difficulty of definitive evaluation of the children's progress. It also includes reports of four staff members involved in the project.

- Northcott (#18, 1971; #19, 1973)* advocates "Implementing Programs for Young Hearing-Impaired Children" from birth and "The Integration of Young Deaf Children into Ordinary Educational Programs" by the age of 3-1/2. This she sees being accomplished through early diagnosis, infant education and home training and then extra tutoring and individualized, diagnostic-prescriptive teaching for the preschooler. She also discusses the role of the parent and describes the UNISTAPS program she developed for Minnesota.

- Berson (#5, 1973), in "Teacher is a Person, Too," stresses the importance of the individual teacher in making mainstreaming work by having four teachers (two preschool and two primary) describe their own unique styles and methods.

- Lewis (#16, 1973) makes a "Case for 'Special' Children" in regular preschools in her description of the program at the Lexington School, which accepts all chidren who apply (20-30 percent are handicapped). The preparation and support provided for the handicapped children entering the program are described.

- Skop (#25, 1974) makes an extensive survey of related literature on "The Benefits and/or Disadvantages of Integrated v. Segregated Preschool Programs for Handicapped Children" and then discusses three programs in depth with their directors.

The following authors emphasize early screening and assessment of any problems or disabilities:

- Adkins and Walker (#1, 1972), in "A Call for Early Learning Centers," advocate public preschool for all, with an early learning center for intensive training of handicapped children, and highly individualized instruction.

- Bardwell, Krieg and Olion (#3, 1973): A "Primer" on the child with special needs, dealing with screening, assessment and integration of handicapped preschoolers.

- Randolph (#22, 1973) states the "Office of Child Development's Policy" on handicapped children in Head Start: identification, recruitment and service.

- Responding to Individual Needs in Head Start, Part I (#23, 1974). This is an introduction to a needs assessment kit that is now being developed for teachers and parents to help identify and respond to the needs of individual children. It describes teaching strategies and handicapping conditions.

Training for teachers in integrated classrooms is covered extensively in these three reports:

- Sanford, Semrau and Wilson (#24, 1974) describe the collaboration between Training-Outreach staff and a county Head Start program.

- Latane, Sanford and Walton (#15, 1974), in their Progress Report of Region IV Head Start Inservice Training, describe the development of their training network and program. (This work would be of most interest to states developing a public preschool network.)

- Gorelick (#9, in process) is developing questionnaires and attitude scales to learn more about "Careers in Integrated Early Childhood Programs."

Other Related Literature

There are also several good, general documents which deal with some of the broad issues relevant to understanding and evaluating the

efficacy of preschool mainstreaming. We found the following ones to be particularly helpful:

- Colvin and Zaffiro (#33, 1974): Preschool education: a handbook for the training of early childhood educators.
- Hewett and Forness (#39, 1974): Education of exceptional learners.
- Hobbs (#39a, 1975): Issues in the classification of children.
- Hobbs, (#39b, 1975): The futures of children.
- Jordan and Dailey (#236, 1973): Not all little wagons are red: the exceptional child's early years.
- Kreinberg and Chow (#239, 1973): Configurations of change: the integration of mildly handicapped children into the regular classroom.
- Sherrick, et al (#256, 1974): Psychology and the handicapped child.
- Stearns (#259, 1971): Report on preschool programs: the effects of preschool programs on disadvantaged children and their families.
- The implications of recent research in early child development for special education, #261, 1973.

VIII. METHODOLOGICAL ISSUES AND PROBLEMS

Overview

The purpose of this section is to discuss the many methodological problems which make it difficult to draw conclusions from the available research on mainstreaming issues and to discuss directions for future research.

We have already touched on some of these problems in our overview of the studies on preschool mainstreaming per se. Because of the scarcity of these studies, we also looked at studies of mainstreaming at the elementary school level, the literature on preschool intervention for the disadvantaged, and the general literature on early childhood education for the handicapped. We talked to various practitioners -- teachers, psychologists and program directors -- to find out what kind of research they felt they needed most in their daily work with handicapped children.

Reluctantly, we have been forced to conclude that traditional methods of research are not yielding a significant amount of information in relation to the effort put into them. The shift toward mainstreaming began, in part, because effectiveness studies of segregated classes for the handicapped showed them to be no better than regular classes. Yet, MacMillan, et al (#128, 1973), in their extremely well thought out review of research on the effects of "labeling," systematically demolish this literature on methodological grounds. To take another example, Lawrence and Winschel (#122, 1973), in their article, "Self-Concept and the Retarded: Research and Issues," review a large number

of studies on this problem, yet there are barely two or three conclusions that they would put above the tentative level.

Poorly thought out research questions, poor research design, and lack of coordination between studies account for a great deal of the low information yield, but there was another problem with traditional research methods that we encountered. The output of these methods -- generalized conclusions -- is not a form of knowledge which is easily translated into classroom practice. Even research-tested, pre-packaged educational programs fall short of dealing with the full range of individual needs of children. What teachers seem to be looking for is a suggestive variety of flexible methods for dealing with individual classroom problems.

In the following discussion of methodological issues, we shall try to give examples from the literature on preschool mainstreaming, but the section deals chiefly with the general literature on mainstreaming issues because of the dearth of research on the preschool level.

Key Articles on Methodology

The following sources have been particularly helpful in analyzing the available research and in forming goals for future research:

- Blackman's (#265, 1972) "Research and the Classroom: Mahomet and the Mountain Revisited," suggests the practitioner as the one who must establish the research priorities and set research styles, and that the services needed should determine the research that is done.

- Gallagher (in Jordan and Dailey, #236, 1973), in "Planning and Evaluation," stresses evaluation as a useful tool only in the context of a total model of decision-making, the difference between process and product evaluation, the need for feedback from participants, and the use of informal as well as standardized evaluation measures.

- Guralnick's (#101, 1973) "Research-Service Model for Support of Handicapped Children" discusses the problems of past research and describes a model which fulfills the needs of both service and research.

- MacMillan's (#127, 1971) "Special Education for the Mildly Retarded: Servant or Savant" focuses on the methodological problems of existing research and the impact this has on its applicability.

- Sanford's (#24, 1974) Learning Accomplishment Profile serves as an example of a diagnostically based curriculum, designed to provide both teaching guidelines and evaluation of individual progress at the same time.

- Stanley, et al's (#53, 1972) Preschool Programs for the Disadvantaged includes several papers which provide a general overview of evaluation studies on preschool programs for disadvantaged children, comparing different curricula and the other variables which determine program success. Most helpful were sections by Bereiter, Weikart and Cazden.

- Suchman's (#279, 1969) Evaluative Research provided excellent general guidelines for evaluating available research, as well as providing guidelines for future research and evaluation.

Methodological Problems in Available Research

What constitutes a methodological "bug" for one kind of research model may not be a problem for another. For example, sampling problems are primarily an issue in the context of the classical research model. Other issues, such as definition of terms, are relevant to any research.

The specific problems that appear most frequently in the existing research on mainstreaming are:

- The failure to clearly define goals and variables in operational terms;
- Sampling problems -- groups used, size of sample, etc.;
- The effects of uncontrolled variation:
- The questionable validity of the instrumentation;
- The lack of generalizability of other research:
    1. The applicability of elementary school research;
    2. The gap between demonstration projects and actual practice;
    3. Insufficient translation and dissemination of available research.

In dealing with the current literature and the problems involved with using the classical research model, the need for alternative research methods becomes more and more apparent. Since research methods evolve from the research questions, it is imperative to return again to the whole issue of the goal of the research. Is it to ask broad questions about the efficacy of "mainstreaming," or is it to help serve the needs

of the individual child and teacher in the classroom? Following the discussion of problems in the available research, this chapter deals with alternative classroom-based research methods such as the research-service model, and the need for a mixed strategy to study the efficacy of mainstreaming as it relates to individuals within their larger communities.

Key problems in the available research are:

Failure to define goals and variables in operational terms

Goals and definitions of terms are seldom stated operationally. For example, if the researcher asks the question, "Is mainstreaming effective?", the first questions to be answered are: 1) How is "mainstreaming" defined in this study?; and 2) What is meant by "effective?" Effective when, how, where and for whom?

Sampling problems

a. When using the "classical" research method, sampling bias is often introduced by the use of pre-established (or "known") groups for comparison, rather than randomly assigning subjects to treatment groups.

In studying the effects of mainstreaming, it is usually the children most likely to succeed who are integrated into the regular classes, leaving the less capable in the segregated classes. This makes progress comparisons between the two groups invalid (MacMillan, #127, 1971; Kirk, #120, 1973). Gottlieb, et al (#223, 1972), compared handicapped

youngsters in preexisting integrated and segregated classes. Recognizing the questionable validity of these results, they repeated their entire study, this time assigning youngsters randomly to the treatment groups.

b. Sample size is a chronic problem in preschool research: classes are small and there are usually only one or two classes serving a particular age group in any one preschool. Also, in a fully-mainstreamed class such as Head Start mandated, only one or two out of 20 would fit the broad category of "handicapped" and, by the time a particular handicapping condition or special need is isolated, the researcher is virtually working with a single case study.

A study by Kennedy and Bruininks (#117, 1974) exemplifies this problem of sample size. Using the entire population of 13 first and second grade classes (277 children in all), they still ended up with a sample of only 15 hearing-impaired children.

This is even more of a problem on the preschool level. Devoney, et al (#8, 1974), using the entire population of their preschool program, had a sample of only seven handicapped children. See Lewis (#16, 1973) and Christopherson (#7, 1972) for further examples.

To treat data resulting from these small samples as a case study (as Devoney, et al, #8, 1974, did) and to draw inferences accordingly is one thing; but to generalize to a whole population from a non-representative group, even if it meets a statistical level of significance, is not a justifiable procedure.

Uncontrolled variation

The variables that are relevant to studying the issue of mainstreaming include cognitive, social, behavioral and language variables, the age and sex of pupils, their family background, specific handicapping conditions and needs and their severity, teacher variables, parent and community variables, program and staffing variables, group dynamics -- the list goes on and on. Neither of the two preschool studies that used comparison groups adequately controlled for most of these variables, although Spollen and Ballif (#26, 1973) do discuss the need for greater control in the analysis of their results.

There is a growing awareness in educational research of the complexity of the phenomena being dealt with: in a natural setting such as a classroom there can be no simple cause-effect relationship. The teacher-child interaction itself is incredibly complex. Gallagher points up this problem very neatly:

> A generation of research personnel in the educational field has matured with the belief that the ideal research project is an evaluation design carefully patterned after a biological medical research paradigm. In the most careful educational research projects, the students are randomly distributed into control and experimental groups. The experimental group gets the treatment (often a new program of instruction), and the control group receives nothing or the equivalent of a placebo. During the period of the experiment, frequent measurements and re-examinations are made to chart the course and effectiveness of the treatment.
>
> The teacher-pupil interactions that were the essence of the measured "treatment" were considered equivalent to a 5 mg. pill in a medical experiment. Often, in the analysis of results, it was assumed that one pill was pretty much the same as another; i.e., that, despite any personal misgivings

> of the investigator, any teacher administering the educational "treatment" was pretty much the same as any other teacher.
>
> The crucial difference between medical and educational research is that the biochemist knows in great detail what is in his pill, but the educator has little or no idea what is in his treatment pill, namely, the teacher-pupil interaction. As a result, the usefulness of information coming from these evaluation studies for either theoretical or practical applications has been limited, to say the least.
>
> Gallagher, #216, 1967

MacMillan (#127, 1971), in discussing the complexities involved with mainstreaming, describes an interaction model which includes at least: "Administrative Arrangement x Child x Teacher x Children in Alternative Placements" and suggests that perhaps the least important variable is the program model. S. A. Ashcroft (in a letter to Thomas Jordan [Jordan, et al, #237, 1971]) would include in this interaction model the formal and informal interactions with parents, siblings, peers and significant others, for both the handicapped and normal children. (See also Barnes and Knoblock, in Kreinberg and Chow, #239, 1973; and Stearns, #259, 1971, on the importance of including the larger social system in the interaction model.)

The importance of controlling for these intervening variables and their interaction is discussed at length by Cazden (in Stanley, #53, 1972) and Suchman, #279, 1967. Extending this trend, it is possible that we are coming to see that the causal network involved in learning situations is too complex and subtly interwoven for disentanglement by our traditional research methods. It is possible

that the very act of observing and experimenting with it may change the network beyond recognition (the "Heisenberg principle").

If we are to continue doing traditional research studies, however, it will be necessary to extend substantially our understanding of the variables involved in order to control them precisely. Accounting for the variables refers to not only the "named" independent and dependent variables -- the treatment and results -- but also the preconditions, the intervening events, and the consequences of the treatment beyond the actual resulting test scores.

Instrumentation

The instrumentation should depend on the research question. Different instruments are appropriate for different questions. Most of the research on mainstreaming has focused on groups of children and, in general, the tools used to measure the effects of a particular program have been standardized, normative tests.

Since these issues are not directly within the scope of this paper, we will only re-emphasize the importance of refining assessment and diagnostic procedures and tools that are based on sound empirical evidence.

However, since there are many assessment instruments already in use, what are some of the problems?

Piaget (#49, 1969) said:

> A test is the method of posing questions so arranged as to satisfy the two following requirements: first, that that question and the conditions in which it is submitted remain the same for each child; second, that each answer be related to a scale or schedule which serves as a standard of comparison both qualitative and quantitative...The test method has two important defects. First, it does not allow a sufficient analysis of the results...[second], it falsifies the natural mental inclination of the subject, or at least risks doing so.

The following passage by Kirk in Jordan and Dailey (#236, 1973) summarizes the dilemma of the educator trying to make educational decisions on the basis of an IQ test score:

> In trying to prove the educability of intelligence, I have followed two principles. One was to start with young children; hence, the emphasis on preschool experiences. The other was trying to make an analysis of children's abilities in such a way that we can institute remediation. If we can't assess children in terms of potential treatment, we have a problem. This is one of the gross limitations of IQ scores. What good is the IQ from the point of view of treatment and education? It is merely an average score of a lot of mental function, partly dependent upon the environment and partly upon heredity. It's just like saying, "This river's average depth is 3-1/2 feet," and when you start to walk, you find that it's only 2 inches on the sides and 10 feet in the middle, and you can sink or swim.
>
> Another problem with the use of IQ scores is that one child with an IQ of 70 often differs greatly from another child with the same IQ. Their handicaps may be very different which means their educations have to be different.

There are several problems with using only standardized, normative tests:

- The fact that young children are notoriously unreliable subjects for any kind of testing;
- The tests are frequently difficult to administer;

- Many of them were developed for particular studies with minimal pretesting and no replications to substantiate validity or reliability;
- Others are culture-bound, geared to a specific segment of the population (e.g., the Preschool Inventory, standardized on a Head Start population, has questionable value when used for a middle-class sample);
- Different disabilities also require different testing techniques, using alternate modes of communication and different emphases.

Another problem is that, at present, there are too few people trained in the process of identification, diagnosis and assessment of children under six, particularly those with handicapping conditions.

The important issue is not only the particular score a child got on a test, but the changes in the score for that child over time and the reasons for the changes. This applies to sociometric and attitude testing, as well as cognitive testing.

For thorough descriptions and explanations of existing testing instruments for preschoolers, see Meier in Hobbs' Volume II (#39a, 1975); Evans in Colvin and Zaffiro (#90, 1974); and see Buros (#265a, 1972) for analysis of validity and reliability of the specific testing instruments.

The range of tests used by individual programs varies tremendously. For example, in a survey conducted by the Chapel Hill Training-Outreach Project, it was revealed that a total of over 30 different kinds of assessment instruments and procedures were reportedly used by the 21 specially-funded Head Start programs in Region IV, with the number used by individual programs varying from 20 to only one.

Small-scale programs, not affiliated with universities or other "expert" sources of testing and support, tend to avoid testing. Although teachers informally evaluate their pupils all the time, many avoid systematically testing them, feeling that they are not really qualified to do so because they are called "teacher" and not "psychologist."

However, more and more programs, while avoiding product-tests (such as the Stanford-Binet IQ test), do use diagnostic-prescriptive instruments such as the Learning Achievement Profile (LAP). This makes it possible to systematize much of the data in replicable fashion, providing information on the efficacy of the program, as well as assessing the progress of each individual child.

One of the most potent techniques is the use of direct observation. Interaction and behavior counts, body language, physical location, time sampling and video taping, are some examples. (See Allen, et al, #1a; Baldwin and Baldwin, #55a; Gallagher, #236; Grosenick, #100; Kirk, #236; Prescott, #50; and Webb, et al, #279a. All discuss the use of observation techniques.) Baldwin and Baldwin, #55a, 1973, p. 183) say this about the use of direct observation:

> The most neglected field of study and one of the most promising ones is the actual observation of handicapped children of all kinds in their families, in school and in other naturalistic situations. While the problems of doing such research are formidable, they are not insurmountable.

The use of direct observation is of special significance to preschool children, since they cannot yet deal dependably with

abstracted concepts of formalized testing situations. To gather sociometric data, for example, direct observation yields much more accurate information than does asking a four-year-old about "best friends" (see Stearns, #259, 1971; and Moore, #142, 1967).

Lack of Cross-Program Comparisons

Bereiter succinctly sums up the problem of cross-program comparisons:

> With few exceptions, studies compare a single program with a control condition, the control condition usually involving no treatment. Findings of such studies, even when adequately designed to test treatment effects, allow only the most tenuous comparison between one program and another, because each program is evaluated by a different experiment, in a different location, with a different population, different testers, and so on.
>
> Bereiter, in Stanley, #57, 1972

This quote also points up the "Hawthorne effect" and the effect of researcher bias.

As far as we have been able to determine, very few of the preschool programs funded by either OCD or BEH are currently collecting good data or conducting good internal evaluations on the efficacy of their mainstreaming efforts. With the exception of the Syracuse University assessment of the Head Start mainstreaming effort, the only comparative efforts being done seem to focus on the collection of descriptive information, rather than on the program process and, again, the definitions are not sufficiently operational to allow accurate comparison and replication.

Authors such as Beeler (#4, 1973), Berson (#5, 1973), Lewis (#16, 1973), Luterman and Luterman (#17, 1974), and Pollack and Ernst (#21, 1973) discuss the aspects of their integrated preschool programs that they see as

being replicable by other "grassroots" programs. But whether results can be similar, given different teachers and settings, is still questionable.

> We must change the notion of research in this area: you can't follow a recipe on mainstreaming. The programs vary too much and so do the children within the programs. We just want to hear how others have worked it out, see what fits, case studies of what has been tried, what did and did not work in terms of both programs and particular children.
>
> (Interview with preschool program director)

Lack of Longitudinal Studies

"If the goal of mainstreaming preschoolers is to prepare them for elementary school, then performance in elementary school should be the measure of success," says Dr. Andrew Hayes of TADS. But longitudinal studies are rare in the current literature on preschool mainstreaming. Kirk's (#14, 1958) study is the one exception, and it shows a strong "washout" effect by third grade. None of the available descriptive literature on preschool mainstreaming programs deals with what happens to the children after they leave the described programs. Several of the directors and teachers at the preschools visited for this report were quite concerned about the handicapped pupils in those programs because, although they were currently integrated with normal children, informal follow-up of previous pupils usually found them in segregated public and private school programs.

Lack of Generalizability to Preschool Education

The beginning of this chapter mentioned the inclusion of relevant research on elementary children in our survey. But how much of the data on elementary school children can be generalized to preschool children?

The difference in the level of development of the children is a key issue. Swap (#27, 1974) has an excellent discussion of the application of Erikson's (#37, 1963) and Hewett's (#39, 1974) developmental theories to handicapped preschoolers and of the importance of knowing what stage the child is actually in.

Even data on teacher attitudes at the elementary grade levels may not be applicable (MacMillan, #127, 1971). And, of course, the goals and curricula vary from the pre-primary to the primary level.

We question the validity of using data from studies at the elementary school level to support hypotheses about preschool children and programs until more research and evaluation has been done on the applicability of elementary school data to preschool children.

The Gap Between Demonstration Projects and Actual Practice

Another problem is that of generalizing from data based on laboratory programs to demonstration programs, i.e., programs established to test particular principles of program organization and working under ideal conditions. Weikart states this quite succinctly when he says that "the operational conditions of

an experimental project are more potent in influencing outcome than is the particular curriculum employed" (Weikart, in Stanley, #181, 1972, pp. 22-66). This conclusion was based on a study by Weikart that found culturally disadvantaged children improving dramatically under all three of the experimental curriculum models compared in his study. Weikart's research thus points up both the "Hawthorne effect" (that being part of an experiment in and of itself affects performance) and the fact that experimental laboratory programs have access to all kirds of money, resources and supportive services not available to the average preschool (as any program director struggling along on a deficit budget with volunteer help will attest). One preschool program director put it this way:

> We want to know how real people with real time and real money cope with mainstreaming, not how fancy laboratory programs with unlimited resources do it.
>
> (Interview)

Translation, Dissemination and Utilization of Research

Blackman (#265, 1972) proposes that:

> Research that is easily disseminated is ultimately research that needs no dissemination at all. It has been cultivated in the classrooms while meeting the teacher's most pressing need -- finding solutions to the problems of why a child does not learn and how he can be helped to learn.
>
> (p. 190)

Certainly, a greater proportion of research and development efforts must go into studies designed to have high application potential (Mackie, #276, 1974). There is little point in doing research that

cannot be used in the classroom. On the other hand, there is much data available from the fields of psychology, anthropology, sociology and medicine that has direct relevance to what the teacher is trying to do in the classroom. To find and disseminate this information, translators and interpreters are needed -- to explain and to operationalize the information so that it is useful to the practitioner. (See Blackman, #265, 1972; Lee, in #261, 1973; and Mackie, #276, 1974, for more detailed discussions of the role of the translator-interpreter in the utilization and dissemination of available research.) TADS (Technical Assistance Development Systems) performs a version of this kind of service to BEH First Chance programs.

But, to expand Blackman's point about research in the classroom, we turn to a related question.

Research or Service? Must There be a Choice?

> The clinician can learn of the true nature of man only in the attempt to do something for and with him.
>
> Erik Erikson*

We have discussed some of the problems inherent in trying to use the classical (biological and engineering) research model to study the effects of mainstreaming preschoolers with handicaps.

Leonard Blackman's article, Research and the Classroom: Mahomet and the Mountain Revisited, (#265, 1972) is an excellent exploration of this issue. Educational research has often failed to make a real

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* E. Erikson, the nature of clinical evidence. Insight and Responsibility. New York: W. W. Horton & Co., Inc., 1964, p. 80.

impact on classroom practices. Researchers are concerned with the "big issues." Teachers want to know how to handle a specific child with a specific problem. Blackman asks: "Who should establish the research priorities and set research styles?" He suggests that the practitioner is the one who must decide what is relevant; that the services needed should determine the research that is done. Blackman and other researchers such as James Gallagher (#96, 1973) and Michael Guralnick (#101, 1973) have been instrumental in a current shift in emphasis from large group experiments using summative product-tests, which can appear to be having significant positive effects while actually even hindering the development of some of the children, to a formative model using intra-individual comparisons (or the N = 1 model that Blackman calls the one-subject case study), which stresses diagnostic-prescriptive techniques of planning and evaluation.

Stated another way, the above authors are shifting the focus from "conclusion-oriented research" (product-testing) to "decision-oriented research" (process-testing). The product-tests are useful for establishing and comparing group norms, but they do not give a whole or necessarily true picture of an individual child in an actual classroom setting.

Kirk (#120, 1973, p. 7) points out that "what is needed is preschool examination that will give us intra-individual differences of the young child without any reference to whether he's higher or lower than his classmates." It is necessary to know not only the child's level of functioning in a particular area but, even more significantly,

to be able to examine the kinds of mistakes the child makes (Koppman in Reger, #51, 1970, p. 30). We have concluded that evaluation of a particular child is best accomplished by actually working daily with the child in a situation in which the research and evaluation are integral parts of the planning and development of the program (Blackman, #265, 1972; Gallagher, #96, 1973; Guralnick, #101, 1973; Kirk, #120, 1973; Rochford, #160, 1970; and Sanford, et al, #24, 1974).

Michael Guralnick (#101, 1973), in advocating the research-service model sees the teacher's most pressing need as being a child-centered research model: finding solutions to the problems of why a child does not learn, and how he can be helped to learn.

The Callier Systems Approach to teaching the deaf, described by Burroughs and Powell (#70, 1964), is another example of the research-service model, developed because of the wide range of abilities within the deaf population, and designed to make it easier to function (for both the teacher and the learner) in an integrated setting because of the individualized approach.

The Learning Accomplishment Profile (LAP) is yet another example (Sanford, et al, #24, 1974). Rather than normative testing (offering a statistical comparison of the handicapped child with a normal population, in an artificial situation), the testing is criterion-referenced, done in the natural environment of the child with his own teacher as the evaluator. It deals with a wide range of

developmental skills, tested in natural learning situations. (At first rather cumbersome, the LAP is currently being shortened and refined.)

The Judge Baker Guidance Center in Boston is in the process of developing a "needs assessment" kit to provide Head Start staff, parents and others with easy-to-use techniques for individualing instruction. The Kit includes a developmental screening instrument to determine which children will have special needs and what they are, classroom assessment instruments, and methods and guides for observing and recording children's behavior and identifying their strengths and weaknesses.

All of these are examples of criterion-referenced process-testing, or of diagnostic-prescriptive teaching, as opposed to normative product-testing.

The real question, then, is where the emphasis of the research on mainstreaming should be. Should researchers be concerned with products or processes? With comparisons between children or changes within a particular child? With tests designed to obtain a statistical measurement or tests designed to help a specific child reach a specific goal? Blackman, Gallagher, Guralnick, Sanford and others advocate the child-centered model for handicapped children as Karnes, Weikart and others do for the "disadvantaged."

Using a classroom-based research model has several advantages. Among these are:

- It serves the immediate needs of the participants;
- It can be changed in process.

And it answers to many of the methodological problems discussed previously:

- All variables and goals are operationalized in meeting the needs of the pupils, allowing for specific replication and comparison;
- Naturalistic, in situ groups can be used; randomization is not required since comparisons are intra-individual;
- Sample size is not an issue, again because comparisons are intra-individual;
- Since each child is an "experimental model," the Hawthorne effect is used to advantage.

Toward a Mixed Research Strategy: The Child-Centered Model

Good research follows from good questions. The research design depends on the research goal. The methodological problems arise from the specific research model used.

In summary, the different research strategies include:

- comparative or control group design versus single-subject design;
- product (outcome) research versus process research;
- normative assessment evaluation versus criterion-referenced evaluation;
- short-term versus longitudinal design;
- laboratory (randomized) design versus natural (in situ) design.

(Summarized by James Wise)

Which of these strategies is (are) used depends on the purpose of the research. If the purpose is to determine cost-effectiveness of mainstreaming for an entire school system, comparative, product-oriented

research would be sufficient, but if the purpose is to help a specific child reach a specific goal, the research design must take an entirely different form.

In conclusion, then, the ideal research and evaluation model would involve using a mixed strategy, since no one measure of a child can give a full picture. Gallagher (#96, 1973) points out that: "While many of us have been trained to think in terms of the use of standardized tests for measurement, many of the most useful kinds of information for evaluation are simple" -- counting the number of contacts a child might have, anecdotal records, testimonial letters, evidence of attendance at meetings. Such measures, although not strong enough individually, can create a total pattern which reliably indicates the efficacy of a program or a child's level of performance. Using a mixed strategy means not simply relying on the evidence from one source of information, one form of evaluation, but rather by using multiple intersecting and overlapping indicators (Levine, #44, 1974; Erikson, #37, 1963; Piaget, #49, 1969; Webb, et al, #279a, 1966, as well as Gallagher, #96, 1973). It also means clearly defining goals and terms.

Using a mixed strategy means thinking not only in terms of a child's abilities and personality, but in terms of his environment.*

It means research projects that encompass a full range of strategies from basic, controlled research in the "classical" model to process-oriented descriptive research. It means analysis of single case studies and whole groups. It means qualitatively-descriptive research, as well as quantitative research, since so little is really known about the development of children with handicapping conditions. It means using educational, psychological, anthropological, sociological and medical methods -- an inter-disciplinary approach.

Evaluation of preschool programs which include handicapped children means testing, assessing and observing in a way that not only allows description of the effects of the program on the participants, but also enables the making of adjustments which will help the programs to meet the individual needs of all involved. It means long-term analysis and commitment.

IX CONSIDERATIONS IN DEVELOPING AN INTEGRATED EARLY CHILDHOOD PROGRAM

> Segregation or integration is not the critical issue. The values and attitudes of teachers and their effects on the pupil's self-perception and performances are the key questions. Segregation without program is just as destructive as integration without understanding. Returning to an educational system which ignores the promise and possibility of the special class would disregard the imperatives of educational history, which have mandated an alternative to wide-range heterogeneity.
>
> Valletutti (#179)

Overview

In this overview we highlight the various factors indicated by the researchers and practitioners read or consulted on this project as most critical in the design, implementation, operation and evaluation of preschool mainstreaming efforts. Not all of these factors have received hard empirical support as yet, but there is considerable agreement in both the research and practical fields. The following points represent key factors in an early childhood program.

Goals

- A clear set of principles and goals, preferably within a theoretical framework, to aid in evaluating the program and in making needed changes.

Program Design

- Some articulated guidelines to assist in intial selection of handicapped children and in placement of all children.
- Curriculum and scheduling that are highly structured, yet remain flexible and individualized.
- An instrument, mechanism or combination of ways to chart the progress of each child along a number of dimensions.

Facilities and Materials

- Physical facilities appropriate for the special needs of the children being served.

- Appropriate materials that are available according to the special needs of each child.

Staffing

- Teachers who are:

  - warmly authoritative
  - committed to the program
  - willing to spend time in careful planning of the curriculum and review of the progress of the children
  - accepting of the concept of mainstreaming.

- A teacher-pupil ratio high enough to permit individualized attention to students. There is some controversy as to optimal ratio, with suggestions ranging from 1:5 (Lewis, #16) to 1:8 (Karnes, #115).

- A supervisory staff that can provide guidance and direction to the other staff members on the focus of the curriculum and that will make necessary changes in scheduling, teacher or student assignment. The supervisor also seems to be instrumental in maintaining a positive atmosphere and high expectations for the children and in resolving staff discord, should it develop.

- Supportive services that are available to all children who require them (physical therapy, speech and hearing therapy, etc.).

Parents

- Parental involvement in the form of home visits and/or the parents' taking part in the operation of the program.

Social Interactions

- Interaction with nonhandicapped peers who can serve as models and can reinforce positive social behaviors.

The Importance of Setting Goals

Stearns (#259) concludes that:

> ...the patterns of improvement in most specific cognitive skills tend to reflect the pattern of goals which are consciously incorporated in the preschool program. While this is the general tendency--for the results to pattern themselves after the stated goals--the amount of change demonstrated in any specific skill area depends on:
>
> - the explicitness of the goals in terms of performance expected of the children;
> - the degree to which the method designed to achieve these goals with children is congruent with principles of child development, has been empirically tested, and is appropriate to the particular children involved;
> - the relative amount of time spent on the goal and the fidelity with which the methods are implemented; and
> - the degree to which the test performance required to demonstrate effects is similar to the activity during training.

We agree with the many educators who believe that all two-to-nine-year-olds -- not just the 10-20 percent with special social/emotional/educational needs -- could profit from multi-aged groupings and highly individualized curricula. However, (in our view) it is unlikely that such an ideal situation will come about in the near future.

Rather, as we pointed out earlier, most schools are operating in the traditional age-graded, ability-grouped mode. Consequently, we must respond to the expectations that most six-year-old children will encounter upon reaching first grade.

Most public kindergarten programs are designed to provide children with the behaviors and skills necessary to succeed in first grade. If mainstreaming into regular kindergarten and elementary school classes is a goal of intervention programs, we recommend that pre-kindergarten efforts be geared toward enhancing that goal. First, however, the specific skills and behaviors required for success in elementary school and the "covert and subtle" expectations that exist in teachers' minds, if not in the literature, need to be drawn out and analyzed more fully.

An obvious difficulty in attempting to spell out these requirements and expectations is that they vary greatly among school systems and, indeed, among teachers. A variety of very different tests is used with preschool children to predict likelihood of success in first grade and none is universally accepted. What is needed is development and dissemination of guidelines outlining specific skills and behaviors that school systems, in general, hold to be important, so that preschool programs can plan activities accordingly.

It would be very useful to draw together, from the full range of school systems, a list of the common skills and behaviors they feel are most important for -- in particular -- first grade success. Incorporated into appropriate guidelines and disseminated widely, such a list could help preschools to focus their program design with more precision.

The research findings presented in Sections VI and VII clearly indicate that highly structured programs have a greater potential for

producing cognitive and performance gains in children with special needs than does the more traditional "laissez-faire" situation in most preschool programs. Important components of potentially successful programs seem to be that they operate within the context of a goal-oriented, theoretical framework and include some kind of internal evaluation system so that the program staff can both evaluate its own performance and be accountable to the larger community. The research findings also suggest that curricula, clearly tailored to the specific needs of the students, are most likely to produce the desired effects.

"Structure," of course, should not imply rigidity and inflexibility. Indeed, most advocates for mainstreaming of handicapped children qualify their support with statements to the effect that individualization and flexibility in the program design, curriculum and scheduling are critical to the success of an integrated program (Beery, #32; Kirk, #120; Birch, #194; Kauppi, #116; Martin, #130; Lewis, #16; Spollen and Ballif, #26; Cruickshank, #35; Dunn, #87, #36; Hewett, #39; Kirk and Lord, #42).

Further, the individualized, flexible, responsive learning situations advocated by many writers in this area have great potential utility for education in general. It may be that many preschool settings approximate ideal learning conditions to a much greater extent than do primary and secondary classrooms. For instance, Swap (#27) reminds us that: "Teachers of preschool children, not bound by...tradition, have a unique opportunity to forge new teaching goals and strategies for reaching them." Swap (#27) presents a succinct argument of the need for

individualizing instruction. While focusing specifically on children with learning disabilities, her comments clearly pertain to children with a broad range of special needs:

> Children with serious learning disabilities help us to recognize that there are many routes to learning the same information, and enable us to be more creative in designing and selecting materials to present. It seems that one of our objectives in teaching should surely be to encourage and strengthen a child's unique abilities rather than to attempt to promote uniformity in our students' approach to learning. In fact, many children who have been labeled as high-risk students because of learning or emotional problems may not be suffering from a profound deficit but as Werry, et al (1972)* explain...'...from a biological variant made manifest by affluent society's insistence on universal literacy and its acquisition in a sedentary position.'

Flexible Grouping and Program Scheduling

Eleanor Grater Lewis (#16), director of an integrated early childhood program in Lexington, Mass. since 1960, describes some aspects of flexibility in her program:

> With a good teacher-child ratio, not more than eight-to-one, there is always someone free to work with one child if necessary. There are extra rooms where children can go to 'blow off steam,' sit quietly, or hear a story. Many alternatives enable the staff or school to provide great flexibility.

Some handicapped children will not be able to participate in group settings to the same extent as nonhandicapped children, and may have to participate for less time each day or for fewer days each week. Given this probable differential in tolerance to group situations, there is some controversy as to the optimal ratio of handicapped to nonhandicapped children. No one seems to have devised a specific

* J. S. Werry, et al. Studies on the hyperactive child VII: neurological status compared with neurotic and normal children. American Journal of Orthopsychiatry, 1972, 42, p. 449.

formula, but a number of program operators suggest at least an even split, with the nonhandicapped constituting, at least, half the class.

Dunn, in his 1968 article (#87), advocates the use of flexible groupings to promote individualization. He suggests that, "With earlier, better and more flexible regular school programs, many of the children should not need to be relegated to the type of special education we have so often provided."

MacMillan (#127) sets the issue of mainstreaming in perspective when he points out that:

> ...the notion that special education and self-contained classes are synonymous must be rejected. The larger issue, and one which if debated and researched could prove fruitful is: to what extent, and under what circumstances, can a wider range of individual differences be accommodated in the regular class than is presently the case.

Program Assessment and Evaluation

Clearly, programs only improve if the people operating them are aware of and can correct their mistakes. An important aid in any classroom is an instrument or some form of internal evaluation mechanism that provides teachers with continuous and rapid feedback on the effectiveness of what they are doing. This is particularly important in the integrated setting because of its complexity and the great individual differences among the children. In the past, most evaluation attempts have taken the form of standardized tests which focus (ostensibly) on program outcome, but not on program process. These test approaches

do not take into consideration the interactive aspects of the classroom situation, and do not make use of the information that is continually available in the classroom.

There are those in the testing field who have attempted to incorporate some of these elements into their assessment instruments. One approach is through diagnostic-prescriptive (or criterion-referenced) tests such as the LAP (Learning Accomplishment Profile, Sanford et al. #251), discussed in Section VIII. Another approach is through the research-service model proposed by Suralnick (#101), which incorporates diagnostic-prescriptive testing into the teaching function itself, and permits the teacher to collect data that provide precise ongoing evaluation of the overall program, the progress of each child, and his/her own teaching behavior.

Very briefly, the research-service model uses multi-dimentional baseline data on each child against which to assess his/her progress in response to particular teaching approaches or combinations thereof. Using a combination of assessment techniques means that the children are measured along a number of dimensions, allowing far more individualized programming and fewer general assumptions about developmental level than result from such normative test scores as the IQ.

There are two key features in the research-service model:

1. Each aspect of the program is carefully broken down into clearly specified units, with each unit containing detailed procedures for attaining clearly defined behavioral goals.

This permits teachers to administer and alter specific instructional procedures for particular children without disrupting the total program.

2. Each relevant aspect of the child's baseline performance (be it social, emotional, specifically perceptual, etc.) must be assessed by a combination of techniques (e.g. diagnostic-prescriptive testing, anecdotal records, interviews with parents and teachers, and other informal approaches). This technique, then, permits the program variables to be examined separately and as a total unit, thus accounting for uncontrolled variables associated with other types of research.

Such an approach permits each service program to become a self-contained research-service unit that can, as Guralnick (#101) puts it:

> ...conduct programmatic research while simultaneously providing educational and other supportive services. In doing so, between-group comparisons are dispensed with, and attention is focused directly on a detailed analysis of the environmental effects on each individual child's behavior while multiple baseline procedures are applied to establish cause and effect relationships.... From the point of view of economy, many of the procedures can be adequately carried out by the teaching staff functioning as teachers and researchers and can be accomplished without significantly affecting their teaching effectiveness. Moreover, it avoids the additional expense, both financial and educational, that results when programs fail or when information about apparently successful programs is obscure or imprecise.

As we noted earlier, the research techniques proposed by Guralnick can simultaneously be used for purposes of:

- o Diagnosis
- o Program evaluation
- o Teacher evaluation
- o Planning
- o Curriculum development and change
- o Parent information

See Section VIII, particularly Research or Service and Mixed Strategy, for an expanded discussion of evaluation and assessment techniques

Teachers

"The most important resource in any classroom is the teacher." Anne Beeler (#4) is the source of this quotation, but the same thing is said, at some point, in any discussion of the education of children. Well-designed programs may improve the learning environment in terms of materials and resources, but the "quality of the people who work with handicapped children [is] the central determinant of the quality of the educational experience. The special classroom was no panacea; neither is mainstreaming" (Hobbs, #39a).

In fact, in a mainstreamed situation, the challenges to the teacher increase dramatically. Where handicapped and nonhandicapped children are integrated, the range of abilities, interests and social relationships takes on a complexity that can confound even the most gifted teacher. No matter how good a teacher is, (s)he may find it difficult to deal with certain children. It is important that a program director take account of this and assign children accordingly, as much as possible, for the sake of all involved. As Valletutti explains (#179):

> The acceptance/rejection order of students by teachers is specific to a particular class and will change when class composition is altered. Ideally, before placing a special child into any class, the attitudes and values of the teacher should be carefully and precisely delineated.

A real advantage that the preschool classroom has over the elementary school classroom is that there are almost always two teachers

in each class. This means that they can trade off responsibility for particular children, or each can be responsible for half of the class, or each can deal with the children (s)he feels most capable of handling.

On the other hand, this kind of cooperation means that the two teachers, be they both professionals, or professional and paraprofessional, or professional and parent, must share a comfortable working relationship.

In the past, preschool teachers have sometimes ignored the special needs of particular children, assuming that they would "outgrow" them, or they would not accept handicapped children into their program, fearing that they would take too much time away from the other children and be too disruptive of the routine.

With mainstreaming, the emphasis shifts from <u>whether</u> to deal with a child to <u>how</u> to deal with a child. Some teachers welcome working with a variety of children with a variety of needs, whatever they may be, and consider the variety to be a stimulus to all concerned. But other teachers want homogeneous groupings, feeling that if everyone is at the same general level, they can all progress more rapidly.

Barngrover (#56) interviewed elementary school teachers, administrators and school psychologists about the mainstreaming of mildly exceptional children. He found that, to a statistically significant degree, more classroom teachers favored segregation, whereas more nonteaching educators preferred integration.

A study comparing the goals and objectives of day care operators with those of nonteaching "experts" found that the day care operators' selection of objectives reflect a need for a smooth, trouble-free program, emphasizing such objectives for the children as being able to follow commands and to take care of their own physical needs. On the other hand, the "experts" focused on more long-range objectives, such as "social cooperation" and the "use of all their senses" (Peters and Marcus, #150).

Since there are no studies on the attitudes of preschool teachers toward mainstreaming, we looked at the literature on elementary school teachers. The trends that emerge include the following:

- Attitudes vary according to the age of the teacher, with the younger, less experienced teacher feeling more favorable toward mainstreaming than the older, more experienced teacher (Jordan and Proctor, #113; Jacobs, #41).

- Attitudes vary according to the type of disability or handicapping condition -- physical disabilities arouse fewer negative feelings than do cognitive deficiencies, emotional problems, or seizures (Panda and Bartel, #149; Shotel, et al, #167).

- Teacher training, including the provision of information on the nature of handicapping conditions and on strategies for dealing with them, increases the teacher's acceptance and willingness to deal with the conditions in some, but not all, cases. (Jordan and Proctor, #113; Jacobs, #41; Lovitt, #283; Yates, #187, all found that training did help. Panda and Bartel, #149, and Lennington, #282, found no significant change.)

- Teachers do feel the need for supportive and resource services when dealing with handicapped children (Barngrover, #56; Beeler, #4; Shotel, et al, #167; Edelmann, #211; Johnston, #234).

There are several problems with the available data, however. Studies are widely scattered. Each deals with different ages, different disabilities and different definitions of disabilities. The studies use different testing instruments, none of which has been really adequately validated. Also, we do not know how much attitudes of preschool teachers resemble those of elementary school teachers.

It appears that the preschool teacher is more accepting of individual differences and "acting out" behaviors, and more accustomed to flexible teaching strategies and individualized instruction. We have found no studies which document the similarities and differences between preschool and elementary school teachers, or between teachers of the handicapped v. regular teachers.

Assessment of Attitudes

Some of the problems with identifying the real feelings of teachers on mainstreaming spring from the nature of the tools currently in use, i.e., questionnaires. They are helpful, but limited in scope. Direct observation and analysis of recordings and videotapes of open-ended discussions between teachers would be a good start.

Teacher Training

The most important characteristics of a teacher are:

- the ability to objectively observe young children;
- an orientation toward child development that emphasizes the child's ability to learn;

- the ability to translate abstract concepts into concrete operations;
- an orientation toward personal growth, her/his own as well as that of her/his pupils.

(Braun and Lasher, #196)

Beyond these characteristics, there are other requirements for the teacher of children with special needs:

> The teacher should be equipped and trained in remedial educational principles and should appreciate the value of supportive as well as compensatory training. The teacher should be prepared to handle the behavior problems that arise from frustration and failure within the student population; consequently, each teacher must be well-grounded in psychological principles of counseling and educational guidance.
>
> (Hobbs, #39b)

This is a large order! It means that extensive training is required for any teacher who must deal with the multiple needs of an integrated preschool classroom. At present, early childhood education students seldom receive any courses in special education which would prepare them for working in an integrated class. This is a serious deficiency, but interdepartmental politics in many colleges has prevented change in this situation.

Teachers in integrated classes require rather specific skills in diagnosis, needs assessment, individualization, behavior modification techniques and curriculum development, skills in observation, a working knowledge of developmental principles and the ability to call in resource people when needed. They also need a systematic assessment of what their needs are in relation to curriculum -- information

about handicapping conditions and materials and teaching methods designed to meet the needs of children with specific handicapping conditions are a few examples (Latane, et al, #15; Braun and Lasher, #196; and others).

Regular inservice training in the form of role-playing, discussion groups and frequent staff conferences, plus the use of anecdotal records and diagnostic-prescriptive testing within the framework of the research-service model, are valuable aids to teacher training. They not only allow the teacher to record valuable information about the children in a systematic way, but, in the process, to learn to observe the children objectively, within the framework of the classroom and, ideally, within the family and the community as well.

Teachers <u>are</u> the most important resource in the classroom. It is their daily interaction with the children that is the essence of any program. But teachers can do an effective job only in the context of a well-defined program with strong mutual support, inservice training and positive reinforcment (among the staff).

(For further information, refer to abstracts key-worded "teacher attitudes," "teaching strategies," "teacher training," and "staff relationships.")

Supportive Services

An important factor of a well-planned and well-executed preschool program within the mainstream is the availability of supportive services from both professionals and paraprofessionals. Our contacts with practitioners and our direct observations of several preschool programs demonstrate that services from professionals such as psychologists, social workers, speech therapists, physical therapists, physicians and special resource teachers should be available to the regular preschool teachers.

Studies that examine teacher opinions about mainstreaming clearly indicate that regular classroom teachers are more willing to accept the special need child if resource teachers and other supportive services are readily accessible (Johnston, #234; Edelmann, #211; Yule, #29; Syracuse University, #13).

The employment of trained paraprofessionals and the active participation of parents can serve to increase the adult:child ratio (Karnes, #115; Sabatino, personal communication).

Unfortunately, many preschool programs do not have adequate support services. Although it seems obvious that handicapped children often need extra support, provisions for these supportive services are often sacrificed because of lack of funds or because of poor administration. Sometimes administrators, who have little experience in dealing with handicapped children, operate under the apparent belief that young, handicapped children need fewer services than do older children, and they expect that the regular teacher will be able to cope adequately with all of the children's needs (David Sabatino, Jackie Green, personal communications).

Parent Participation

> In order to provide the best climate and training for the handicapped child it is imperative that parents' involvement be sought, cultivated and acknowledged as extremely valuable.
>
> (Cansler and Martin, #201)

Educators who work closely with parents are convinced of the importance of family involvement with preschool programs. These educators point out that parental involvement will not only strengthen the efforts of the school's program, but will also provide parents with the opportunity to experience the satisfaction and pleasure of sharing in their child's successes.

The research on parental involvement, though limited and inconclusive, supports the opinion that parents' participation is a critical factor in the success of a mainstreamed program. For example, a research project directed by Susan W. Gray, in cooperation with the public schools of Murfreesboro, Tennessee, demonstrated that early intervention programs for disadvantaged children that involve parents are more successful than programs that only give assistance to the child.

Many Head Start program researchers, in addition to Gray, conclude that intensive parental involvement is an important component of programs that produce positive changes in intellectual development. As we were unable to locate studies that isolate and evaluate parent participation in preschool programs for the handicapped, the results from Head Start may be characteristic of programs dealing with

children from low-income families. However, it would seem logical that programs involving parents enhance the possibility that continuity will be built into the child's learning processes, thus focusing the attention of significant others on desired and desirable goals for learning (Zigler, #210; Cansler and Martin, #201).

Consequently, a positive attitude on the part of educators toward the parents' ability to participate in a program should foster a better education for the child.

Although most researchers, program directors and teachers now operate on the assumption that some kind of parent participation enhances the effectiveness of an educational program, there is very little data which specifies the type of participation which is most beneficial.

Possible research questions include:

- the various creative ways in which parents can participate in a mainstreamed preschool program;
- the kind of support that parents of handicapped children need when their child is entering a regular classroom;
- the numbers of parents who participate in a program, how often and in what capacities, correlated with their attitudes and with the progress of their child.

Curriculum Materials and Toys

At the 1974 Conference for the National Association for the Education of Young Children, there were literally hundreds of brightly colored, appealing toys and pieces of equipment for sale to early childhood programs. A growing number of these materials are advertised as being designed for children with a variety of disabilities. However, there is a conspicuous lack of information about the efficacy of these materials, either from the developing companies making the claims for their suitability or from outside researchers. Furthermore, many of the materials are sold without instructions to guide teachers in the proper use of the material.

Many educators suggest that the curriculum materials are ancillary tools and are not really very important in doing much beyond providing a focus for the teacher and the child. These educators believe that the teacher is the critical factor in the process of education and that his or her ability to motivate the child toward a desire to learn and to maintain that outlook is the critical means by which education takes place. Weikart's research, discussed in Section VI, Part B, would support the view that both the style of program and the curriculum content <u>are</u> secondary to other factors that are associated with the motivation and commitment of the staff. Is it possible that the more motivated the staff, the more motivated the child?

Other researchers, like Englemann and Becker (the DISTAR curriculum developers) believe that the curriculum does matter and preliminary findings would suggest that the use of DISTAR has, in fact, produced significant short-term gains in cognitive performance (conversation with James Wise).

Aside from the continuing debate among researchers about the relative importance of curriculum style and content to other factors such as teachers and motivation, the fact remains that millions of dollars are spent each year by parents and schools in the purchase of toys and other equipment. The safety and durability of toys has recently been the focus of several persons interested in the protection of consumers and their children. It, therefore, seems appropriate for the Office of Education to support a number of investigations that would produce much needed information on the comparative effectiveness of materials with children possessing a wide variety of learning styles, abilities and disabilities.

Most toys are designed to develop a set of skills. More information and research is needed to assist parents and teachers in understanding the purposes of specific toys and the skills involved with using them.

Many early intervention programs for handicapped children have found it necessary to teach children how to play with toys as well as with each other. A staff person from one program we visited has done

an extensive search for research or descriptive literature that would guide her in selecting and using materials appropriate for her classrooms. She found no current materials that had evaluated the use of commercially available materials, either with handicapped or nonhandicapped children.

The implications of research on this subject for integrated settings are considerable. For one thing, though children in an age-grouped setting are chronologically the same age, the handicapped child will probably be slow in developing in at least one dimension. Consequently, consideration will have to be given to providing a wider range of curriculum materials than might have been previously offered to that age group.

For instance, although Montessori classrooms are generally multi-aged settings, classrooms are designed so that areas within the classroom are stocked with materials for certain age groups. If the handicapped child is not ready to use the same material as others of his age group, he may suffer a loss of self-esteem and an overall sense of failure and frustration. Consequently, the teacher in an integrated classroom may have to plan carefully so that the handicapped child does not feel conspicuously out of step with his/her nonhandicapped classmates. Indeed, the inclusion of handicapped children in such a classroom may necessitate alterations in the entire structure of the program design.

Physical Environment and Facilities

The arrangement of the physical environment in the classroom is an important consideration when planning and operating an integrated preschool program (Evans, #90a; Beeler, #4; Responding to individual needs in Head Start, #23; Abeson and Blacklow, #189; Anderson, #30; Braun, #66). While the organization of the physical environment is important for all handicapped children, it is especially so for children who are physically and visually impaired. Quite simply, many physically and visually handicapped children cannot participate in programs which do not make proper allowances in architecture and classroom arrangements.

Another group of children who have special needs in relation to the physical environment are those who are prone to be hyperactive, emotionally disturbed, or who are learning disabled.

Some educators believe that these children should be in environments that regulate such factors as the number of children, the number of adults, and the noise and activity levels, in order to enhance the ability of these children to concentrate and to learn (Beeler, #4). Others (Cohen, in The implications, #261) disagree that such changes should be made, arguing that a goal of education for such children should be to help them adjust to normal environments. However, there seems to be widespread agreement that a dependable, structured environment is desirable for handicapped children and, indeed, for most

children. A disorganized, rapidly changing physical environment can add to the problems that many handicapped children have in ordering their perceptions of the world.

In short, careful planning for room arrangement and learning materials is not only a necessary component of an integrated program, but it can help both handicapped and nonhandicapped children to develop a sense of stability, security and order (Evans, #90a; Beeler, #4).

A summary of the most frequently mentioned factors to be considered when planning for the integration of handicapped and nonhandicapped children in the same preschool classroom includes:

- accessibility of classroom to entrance;
- placement of furniture;
- accessibility and safety of equipment;
- transportation;
- provision and space for special equipment (wheelchairs, ramps, etc.);
- allowances for small-group and one-to-one work;
- space for "quiet times."

X. ISSUES IN TRANSITION FROM INTEGRATED EARLY CHILDHOOD PROGRAM TO ELEMENTARY SCHOOL

The issues involved in helping the handicapped child move from a mainstreamed preschool to an elementary school setting are the object of much concern and frustration among those preschool educators we interviewed.

An exhaustive search of the literature for material pertaining to helping the handicapped child adjust to elementary school under any circumstances was fruitless. A number of research studies involved children from kindergarten through grades one, two or three and one study (Spollen and Balliff, #26) involved just kindergarten children. However, none of them focused on (or even mentioned) the process of shifting the handicapped child from home, from a self-contained or an integrated preschool setting to elementary school. This is apparently an important component of mainstreaming which has received little or no attention from researchers and educators.

It was in this area that our structured interviews and meetings with preschool educators served as vital and productive sources of information. Almost all of the practitioners who shared their experiences with us provided valuable anecdotal material on and insights into the process of transition. The material in this section is based largely on these verbal communications.

First, many practitioners mentioned that former students, who had been successfully integrated into preschool programs, were unable

to move into an integrated elementary school setting, either because none was available or because the regulations governing public school placement in their jurisdiction permitted no deviation from existing rigid "eligibility" standards.

Further, it appears that some preschool programs (particularly Head Start programs) have continued to provide services to children who have gone on to elementary school because the kindergarten, first, and in a few cases, second grade teachers felt that the preschool could offer these children more flexible and individual attention. The preschool programs that were involved received no compensation and were, therefore, unable to hire additional staff to render this service. It was also an indication that at least some handicapped children were being mainstreamed into situations with inadequate supportive staff and services to meet their special needs. Iano (#107) cautions that, "...before we mainstream mentally retarded children we should pressure for changes in the grade system in general education and should encourage a greater degree of interaction and cooperation between special and general education programs than there has been in the past." While Iano refers only to retarded children, it is likely that the same caution applies to children with other disabilities. Indeed, many authors, while not addressing transition issues, specifically, have expressed concern that mainstreaming efforts have moved ahead too quickly and without proper regard to their potentially negative effects.

Even though professional educators agree that a successful effort to integrate handicapped and nonhandicapped children must be flexible and individualized, we have found a great deal of evidence to suggest that many school districts have been reckless in their implementing the concept of mainstreaming. For example, some schools are placing the handicapped children into regular classrooms without providing sufficient supportive staff or services. Still others seem to have interpreted mainstreaming as the elimination of all special education methods and facilities.

Unfortunately, many school systems continue to operate in a traditional mode, requiring the individual child's learning style to match the demands and requirements of a relatively standardized learning environment and curriculum. The child whose abilities and behaviors do not match the prescribed curriculum will probably have a difficult time in school.

Kirk's (#120) discussion of recent results from studies of Head Start seems related to transitional problems:

> There is an initial increase in test scores, but when the program stops, or the environment changes, the scores drop. In many preschool programs, the scores are high until the age of 5; then the children are placed in kindergarten and the scores drop. Often the kids move from a situation of one teacher to five children to a kindergarten of 30 or 40 kids. Predictably, many of them feel completely lost and the gains seem to disappear.

A hopeful note is that preliminary findings from the Syracuse University investigation into the mainstreaming effort in Head Start (#13)

suggest that some Head Start program operators are now making special efforts to provide adequate continuity between their programs and public school programs.

Some researchers and educators believe that much can be gained from the provision of preschool education by public school systems. In terms of cost-effectiveness, this is a valid goal. The public system would also profit from the flexibility and creativity found in many preschool programs.

We recommend that BEH support some attempts to examine the issues in this area. Some of the most critical questions seem to be:

- What are the coordinating mechanisms, formal and informal, between integrated preschools and elementary schools?
- What are the kinds of services being delivered by preschools to elementary school children and the reasons for this arrangement?
- What kinds of problems arise for handicapped children in the first months of school? How are they resolved?

It would also be useful for each state to analyze existing regulations that enhance or present barriers to mainstreaming in local school jurisdictions.

XI. CONCLUSIONS AND RECOMMENDATIONS

Overview

The primary goals of preschool intervention for the child with special needs are to draw on and develop the child's potential to the maximum and to enhance his/her ability to participate in a regular elementary school setting. While preschool mainstreaming clearly has benefits that cannot be overlooked, we conclude that only when the primary goals are met as successfully in an integrated setting as in a segregated setting does the inclusion of nonhandicapped children become an added and highly desirable goal for the preschool education of the handicapped child.

Despite the fact that research findings have not definitively demonstrated the intrinsic superiority of any method of intervention over any other method, we can conclude that the greater the degree to which an intervention program focuses on the child's special needs with specific remedial techniques, the greater the likelihood that the child's disability will be lessened.

Attaining this goal, however, requires that we be willing to pay for programs that can provide these special services. Clearly, a greater effort is needed to educate the general public on the benefits deriving from support of this kind of program. The greatest barrier to preschool mainstreaming is that public financial support will be needed to modify regular preschool programs so that handicapped children will receive the special assistance they need.

This point of view is best summed up in the following passage by Hobbs (#39a):

> We see the movement as a manifestation of a larger commitment to individualization of instruction for all children, and we are wary of the preemptive power of the term "mainstreaming" for fear that (like other labels heavy with surplus meaning) it will legitimize abandoning exceptional children to undifferentiated classroom programs. In schools that are most responsive to individual differences in abilities, interest, and learning styles of children, the mainstream is actually many streams, sometimes as many streams as there are individual children, sometimes several streams as groups are formed for special purpose, sometimes one stream only as concerns of all coverage. We see no advantage in dumping exceptional children into an undifferentiated mainstream; but we see great advantages to all children, exceptional children included, in an educational program modulated to the needs of individual children, singly, in small groups, or all together.

There were very few specific research-oriented recommendations among the several hundred documents we reviewed for this study. To augment and supplement these literature-based recommendations we solicited suggestions for needed research from researchers and policy makers in the fields of early childhood development and education, and from the staff of each program to which site visits were made.

Many of the respondents advised us that, since mainstreaming is a reality at the primary and secondary school levels and is likely to become much more widespread at the preschool level, research has to go beyond the question of whether or not mainstreaming is a "good thing." As has been pointed out by others before us, preschool programs differ greatly in goals, purposes, structure, and style.

Since most states do not require that nursery school teachers be licensed or accredited in any way, there is a great variation in the background and preparation of staff persons. There is still much controversy over the instruments used to assess the "capabilities" of young children. Specialists in child development have generally focused on normal children and little has been written about "normal" development of handicapped children. In short, there are many questions, and very few answers.

Several of our respondents suggested that it is too soon in the research effort concerning handicapped children to do much beyond generating researchable questions and conducting exploratory studies. Others, among them the social scientists we consulted, felt that many of the issues educational researchers are just beginning to address have been well researched by social scientists in other settings and that researchers in education are just "reinventing the wheel." Still others, mostly practitioners, generally felt that research is still far too removed from the practical needs and concerns of those who work with children. This is a standard argument between researchers and practitioners in many human service fields. To sharpen the argument, we have elsewhere in this paper attempted to spell out what practitioners mean by "practical concerns." A final group of respondents suggests that one problem encountered in much educational research, especially in the field of mainstreaming, is

that it ignores the forest for the trees. Researchers, they say, have often isolated for study relatively small factors within very complex systems and have paid little attention to their interactions with other aspects of the system. In their view, many of the issues involved in mainstreaming might better be studied by systems analysts or management experts.

Unfortunately, the current emphasis on statistical accountability has produced public demands for evaluation of publicly supported programs. These demands often have placed educators in a defensive posture.

Demonstration programs are funded (usually on a short-term basis) by the Federal government, because they show promise of developing innovative program strategies. Usually, about the time that they show promise of fulfilling their goals, their time is up and Federal support is given to a new round of "demonstration" programs. Very few of these model programs are engaged in systematic research and very few of them have ever been more than informally evaluated. It seems, at best, a waste of precious money to fund demonstration programs that are not doing in-house research, that are not being evaluated by any objective, systematic criteria and are not the objects of the kind of comparative, process-oriented and descriptive research effort recommended here.

Recommendations for Census Taking and Information Gathering by the States

As states increasingly are faced with decisions on preschool education for the handicapped child, they will need information, which in most states, is not now available. This census-taking, information-gathering effort will necessarily involve Federal, state and local participation. Federal financial assistance will almost certainly be needed. State coordination will be essential although the actual data collection will take place within the local school district.

For each state to plan and implement a preschool program for the handicapped, the following kinds of questions will have to be answered:

- What is the preschool population?
- What proportion is handicapped?
- What kinds of handicaps exist in the preschool population?
- What proportion of the handicapping conditions does each type of handicap represent?
- What percentage of the handicapped preschool population is being served?
- How does each community serve its handicapped preschoolers?
- What public education is available for handicapped preschoolers?
- What is the relationship between the schools, the parents and the community service agencies?
- What parent-help projects are available (through agencies like the Y, local colleges, etc.)?

- Are funds available to private preschools which want to serve handicapped preschoolers?
- If so, are the funds public, private or both?
- How do preschools qualify for existing funds?
- Does the funding and cost-accounting system allow a free flow of children between regular and special programs, public and private?

It probably will also be necessary for each state to conduct a systematic survey of all licensed child care and preschool facilities operating in the state. Combined with the data obtained to answer the questions cited above, these surveys would enable the states to identify: 1) what kinds of programs are available; 2) the qualifications and capabilities of the staffs of these programs; 3) what proportion of the preschool, handicapped population is being served by existing programs; 4) the kinds of handicapped children presently being served and those which, for the most part, are not being served; and 5) the type and level of funding used to support existing programs.

A data base of these dimensions would make it possible for state educational planners to make decisions on a more informed, systematic basis than they are currently able to do. Knowing the parameters of the need and the degree to which the need is currently being adequately met would, in effect, define the magnitude and nature of the still unfulfilled need.

Policy-Related Recommendations

As an overall policy, we would suggest that BEH direct more attention to supporting the synthesis and dissemination of existing knowledge about handicapping conditions of and programming for handicapped children. This might be accomplished in a number of ways: small group conferences, large multi-disciplinary conferences, round robin exchanges of "think" papers, technical assistance to developing programs by experienced practitioners, and so on. We suggest these approaches, not as alternatives to preparing reports such as this one, but as mechanisms for more quickly and easily facilitating the dissemination of ideas and information.

There is a strong need in this field for researchers, on the one hand, and practitioners, administrators and policy makers, on the other, to share and translate their interests and concerns. Practitioners need to be listened to more carefully by researchers, and researchers need to make a greater attempt to apply their skills to questions and issues of practical import.

We have concluded that, in setting research goals for the next five years, BEH should have as a priority, the synthesis and dissemination of existing research information on the implications that characteristics of the various handicapping conditions have for educational planning and services.

We recommend that BEH support one or several reviews of research. These efforts would be designed to examine existing literature concerning

the various kinds of intervention provided for children under six years of age with a variety of handicapping conditions. The literature should be drawn together to determine:

- what further research is needed;
- what the existing research suggests for program development and design strategies; and
- what the findings suggest regarding both the integration of handicapped children into regular preschool programs, and the integration of normal children into programs for handicapped children.

Insurance and Tax Deductions

We suggest that BEH support an investigation of whether medical insurance covers any of the cost of educating preschool children with handicaps and whether an integrated setting would be perceived in the same way as a strictly "therapeutic" program. Along these same lines, would the tax laws that permit deductions for certain treatments and educational programs for handicapped children, also cover integrated settings? Under what circumstances?

Recommended Approaches to Future Research

Our literature review, our discussions with researchers and administrators in the field of early childhood education, and our own feelings and perceptions, led to a number of general conclusions about the research needs in this field, both philosophically and technically.

There is a need for hypothesis-forming, largely qualitative research, given that too little is known as yet to conduct cost-effective hypothesis-testing, largely quantitative research, with

any rigor. Badly needed in this field are better descriptors for preschool programs by means of which comparisons among programs can be made in a more meaningful way and the more influential program characteristics identified. There is also a great need to develop standardized definitions in order to make cross-program comparisons meaningful. We need to learn much more about what kinds of program models are useful for what kinds of children.

While highly structured techniques and instruments can provide much important information about how groups of people behave after we have identified the behaviors we want to examine, these highly structured, statistical methods often fail us when we try to understand the processes involved in motivation, body language, attitudinal development and change, and the hundreds of subtle interactions between human beings.

Exploratory Studies of the Mainstreaming Process

We recommend that BEH support several exploratory, process-oriented studies of the mainstreaming process in early childhood education programs. These studies should be comparative in nature and should be directed toward identifying the key variables and characteristics of the process of providing educational services to young children in an integrated setting and formulating researchable questions. Such investigations should be done on a logitudinal basis but with a clear mandate to provide preliminary findings at specified intervals. Researchers following this strategy must be free to

explore new forms of information gathering. Sociology and anthropology have provided a number of innovative techniques that have added greatly to our understanding of cultural characteristics and cross-cultural comparisons. In dealing with preschool programs we are, in a sense, dealing with a similar research problem: we are trying to understand and describe programs that are as different from one another as cultures are from one another.

We suggest the use of a mixed strategy of techniques to study these programs (see Section VIII for detailed discussion). The techniques employed could include use of such direct observation techniques as videotaping, behavior counts, and recordings to measure both variations and progress achieved by both individual children and programs as well as more structured instruments.

These studies might focus on cross sections of early childhood programs such as: First Chance programs (funded by BEH), Head Start, and programs with no Federal support that include handicapped children in a regular preschool setting.

Further, there is a need for studies of programs that are not yet integrated to see how they prepare for integration, and to learn what happens to both the handicapped and nonhandicapped children, and to teachers and parents as integration takes place.

Following our recommended approach can assist not only in determining critical program variables, but in beginning the process of matching the needs of children to these variables.

This approach could also be useful in examining the process of transition between integrated preschool and elementary school settings for handicapped children by doing longitudinal analyses of different patterns of transition according to program styles, teachers' acceptance of mainstreaming and handicapped children, regulations, eligibility, etc.

Investigation of Critical Variables in Programming

There is not one "ideal" system of integration, nor one ideal degree of integration, nor one ideal curriculum, and the methods and techniques used to meet the children's needs vary tremendously. But there are trends toward instituting more structured program designs than those found in the traditional nursery school and toward individualizing instruction to meet the needs of each child, whether handicapped or not.

The ability and attitude of the teacher appear to be the most important factors in the success of an integrated program, and many programs consider parent involvement and/or cooperation to be important. Careful planning for room arrangement and learning materials is not only a necessary component for an integrated program, but it can help both handicapped and nonhandicapped children to develop a sense of stability, security and order.

Many educators believe motivation is the critical variable. It may be that motivational factors are key to promoting the "Hawthorne effect." A combination of teacher and student motivation,

at a high pitch, keeps excitement and commitment high.

We are in general agreement with Weikart when he concludes that:

> ...experimental projects in which researchers have direct control of the curriculum, the operation of the project, and the research design seem to offer potential for immediate positive impact in terms of their stated goals.... Preschool experience can make a difference for disadvantaged children. Unfortunately, I am speaking only of special situations.

We suggest that researchers attempt to identify the means by which the "Hawthorne effect," to which Weikart is referring, can be permanently instituted within the structure of programs.

Teacher Training

One of the major findings of this investigation was that many "teachers" in preschool programs apparently have not had training in child development, teaching or in special education. We believe that more information is needed about the people who work in preschool programs and the process by which they are selected and trained.

Some of the questions that need to be addressed are:

- What training for working with handicapped children is required for early childhood education teachers? What is available as electives? What are the policies of teachers colleges on the preparation of teachers to deal with mainstreaming? How do they implement these policies?
- How do BEH policies effect teacher training for the non-categorical approach to educating handicapped children that mainstreaming requires?
- How well are the projects working with competency-based criteria for selecting teachers of preschoolers disseminating this information?

Testing and Assessment

We recommend that BEH support efforts to:

- assess what research methods and models used with elementary school age children in the field of testing are valid when used with preschoolers;
- revalidate various tests, using samples drawn from a universe that includes handicapped children;
- train more people to administer tests to children under six years of age;
- promote the use of criterion-referenced process-testing and diagnostic-prescriptive teaching, as opposed to normative, product-testing approaches to teaching;
- promote the use of built-in, nondisruptive, useable evaluation plans in demonstration programs.

We conclude with the observation that it may be that, in most cases, the handicapped child cannot afford the luxury of just having a good time at nursery school -- the frequently quoted axiom "a child's work is to play" is not the handicapped child's privilege. (S)he has real work to do and for a parent or teacher to say that this child should be allowed to simply flow along with the nursery group, to be happy and to play, is denying that child his right and his need to be prepared to function on a more demanding level later -- otherwise, he may be removed from the mainstream after reaching elementary school, with far more negative effects.

APPENDIX A: LISTS OF CONTRIBUTORS

Programs

Yvonne Ali and the staff of the EPSDT Therapeutic program of the National Capital Area Child Day Care Association, Washington, D.C.

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Joyce Chance and Marilyn Semmes of the Preschool Program for Handicapped Children in Fairfax County, Virginia.

Susan Elwell and the staff of the Chevy Chase Baptist Church Community Child Care Center, Washington, D.C.

Marion "Jackie" Green and the staff of the Federal City College Demonstration Nursery Early Child Learning Center in Washington, D.C.

Dr. Michael Guralnick and the staff of the National Children's Center, Washington, D.C.

Constance Maier of the Good Start Program in Washington, D.C.

Edna Monsees, Director of the Montgomery County, Maryland, Public School Program for the Hearing-Impaired, and her staff.

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Anne Sanford and the staff of the Chapel Hill Training-Outreach Program, Chapel Hill, North Carolina.

Janet Weaver and the staff of the National Child Research Center, Washington, D.C.

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Organizations

American Educational Research Association.

Association for Childhood Education International.

Day Care and Child Development Council (Dana Friedman).

National Association for the Education of Young Children.

PART II

Introduction

This bibliography contains 291 references by 326 individual authors and is divided into six sections: literature on preschool mainstreaming, books, articles, documents, references, and speeches and presentations.

The Preschool Mainstreaming Literature is presented as a body for the convenience of the reader wishing to know the extent of the pertinent literature. Although no bibliography can ever be said to be complete, this particular section represents an exhaustive search of the sources mentioned in the Procedures section in Part I of this volume.

The section on Books is self-explanatory except to say that for our purposes a book was any volume published by other than a governmental body.

Articles includes abstracts and citations from journal articles and abstracts of relevant articles from books and documents.

Documents are publications sponsored and/or published by state or federal agencies.

References are materials that have provided relevant methodological background.

Speeches and Presentations are self-evident.

Subject Index

In preparing this bibliography, the authors developed an extensive key word system which gradually was refined to the present list presented here as the Subject Index. In many cases, the key words listed beneath the citations represent only the key points mentioned in the material. On the other side of the coin, the Subject Index is not a complete list of articles covering the individual subjects.

Author Index

The reader wishing to find materials by a particular author is referred to this listing. We attempted to include all of the authors listed in multiply-authored materials, but we recognize that we probably omitted some names and apologize to those whom we neglected to mention. In a few cases, confusion arose as to who had written or edited material, and we found our mistakes too late to make the changes.

Our apologies to Shirley Cohen, who edited #261, The Implications of Recent Research in Early Childhood Development for Special Education.

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I. Early Childhood Education Mainstreaming

1. Adkins, P.G. and Walker, C. A call for early learning centers. Academic Therapy, 1972, 7(4), 447-451.

   Early Childhood Education/Individualized Instruction/Teaching Strategies/ Social Adjustment/Learning Disabilities/Early Childhood Education (ECE) Mainstreaming

After a brief justification of public preschool education for all, it is pointed out that children who are limited by learning disabilities particularly need to begin at an earlier age to gain the knowledge and skills employed in competing successfully in the public schools. A problem, however, rests in identifying these children who need special help during their preschool development. The authors stress a need for physicians, psychologists and neurologists to work with educators to pinpoint disability and prescribe early remediation in order to prevent a child from becoming further handicapped educationally, emotionally or socially. They see the main teaching concern for the learning disabled preschool child to be linguistic development, for communication is central to learning at all levels of the educational process. The structured preschool program should also aid in the mastery of conceptual, motor and social skills of the handicapped child. The teacher's importance is in setting behavioral objectives individually and guiding the child in their obtainment, but also allowing him to experiment and discover for himself. "To build an ideal model for an early learning center in which handicapped children can receive proper remediation will take great efforts on the part of medical and educational professionals, but the benefits to the children throughout their school years make it worthwhile."

1a. Allen, K.E.; Benning, P.M.; and Drummond, T. Case 16: Julie: Integration of normal and handicapped children in a behavior modification preschool: a case study. Paper presented at the Third Annual Conference on Behavior Analysis in Education at the University of Kansas, Lawrence, Kansas, May 1972.

   ECE Mainstreaming/Teaching Strategies/Emotionally Disturbed

   This case study is part of research in progress at the Experimental Education Unit Model Preschool, Child Development and Mental Retardation Center, University of Washington.

PURPOSE: To find out if integration in a group composed of 50% normal peers would eliminate the maladaptive behaviors of an emotionally-disturbed child; to find out whether specific intervention procedures would be required for any of the behaviors; and to find out how much data-taking a supervising preschool teacher can manage without its interfering with on-going activities.

SUBJECT: Julie, three years and 11 months old when she was enrolled in the Model Preschool, had been diagnosed as emotionally disturbed with no neurological impairment.

PROCEDURES: The Washington Social Code was used as the data system, recording child's behaviors at 10-second intervals for 20 to 70 minutes during free play indoors. Data was collected on six categories of behavior, during baseline and four intervention phases, all experimental procedures having been agreed upon by the staff. The child-teacher interactions were also videotaped. The study was conducted from September 30th to December 7th.

RESULTS: There was a rapid, steady decrease in negative, disruptive social behavior once specific intervention was begun; cooperative play increased in the final phase of intervention. The conclusions drawn were that progress is rapid where the intervention is specific and when there are normal peers to serve as models for appropriate behavior; also, that the "cost" in teacher time seemed reasonable. (Nine graphs demonstrate the progress of the child.)

COMMENT: This study is an excellent example of a careful, replicable case study. It provides information not only on the efficacy of "mainstreaming," but on specific intervention tactics and the teacher's role.

2. Bailey, D.B., Klein, T.L. and Sanford, A.R. A model for resource services to the young handicapped child in a public school setting. Chapel Hill: Chapel Hill Training-Outreach Project, 1974.

ECE Mainstreaming/Educational Planning/Resource Room/Consulting Teacher

Filling the need which was created from the movement to integrate young special need children into regular public school settings, the Chapel Hill Training-Outreach Project designed a model for "development, implementation and evaluation of a comprehensive approach to mainstreaming the young child..."

The program is directly concerned with helping the special need child, his/her family and the regular classroom teacher. The components of this program are clearly specified so that other programs can replicate and expand the model.

3. Bardwell, A., Krieg, F.J. and Olion, L.D. Knowing the child with special needs: a primer. Chicago: Head Start, Office of Child Development, Region V, 1973.

ECE Mainstreaming/Screening - Early Identification/Parents' Role/ Teaching Strategies

This pamphlet deals with screening and assessment of the child with special needs, the integration of children with special needs into the normal preschool class, and the participation of parents in the integration process.

4. Beeler, A. Integrating exceptional children in preschool classrooms. BAEYC Reports, 1973, XV(2), 33-41.

ECE Mainstreaming/Teaching Strategies/Emotionally Disturbed/Regular Class Placement

This article deals with the integration of emotionally disturbed children into the classroom composed primarily of normal children. "Emotionally disturbed" is a garbage can term applied without diagnostic consistency; the label frequently obscures the real causes of difficulty.

The writer believes that the things she has found necessary for disturbed children are strongly advised for normal children as well. The ideal classroom for normal children approaches the therapeutic classroom for disturbed ones. Children of all labels thrive in a classroom in which the following criteria are met:

- A supportive and accepting teacher's attitude.
- Written evaluations every two months to help break stereotypes.
- Small teacher-pupil ratio (integrated class with 10-15 students and two teachers is optimal).
- Sufficient control of the environment to prevent overstimulation.
- The environment of things and people should be predictable and consistent.
- Specific logical limits set and enforced.
- Freedom of choice and movement. Sensitive preselection of the choices available can help insure success experiences and the development of initiative.
- Good relations between parents and teachers.
- The teachers should be well cared for, since they are the most important resource in the classroom, with other teachers available as models and sources of relief, support and feedback; time out of the classroom, observing and learning.

It would require more money, more teachers and more commitment than are now available to implement these recommendations. The rest of the article elaborates on suggestions for applying these principles in the everyday non-ideal classroom.

Comment. An extremely helpful article in favor of integration, but it indirectly points out one of the main arguments against it: the lack of the "ideal conditions" that make it work well.

5. Berson, M.P. Teacher is a person, too! Early Years, 1973, 48, 39-42.

ECE Mainstreaming/Teaching Strategies/Regular Class Placement/Early Childhood Education/Supportive Services

The Metcalf Laboratory School at Illinois State University involves six Early Childhood Classrooms in which nonhandicapped students of various ages and social and economic backgrounds are mixed with children with such handicaps as deafness, vision problems, speech deficiencies, physical disabilities and cerebral palsy. The goal of the school is to provide, for all students, a comprehensive program that offers transportation, nutrition, psychological and social services, as well as developmental, creative education. To provide these varied services to disadvantaged, emotionally disturbed, handicapped and normal children, the school uses various supportive personnel. A child psychologist is on the full-time staff; there is also much specialist support from many departments (psychology, special education, elementary education, speech therapy) of the university. The key to the real success of the program, however, has been the dedicated and interesting teachers who have developed their own individualized programs to reach the unusual mix of students. To show the uniqueness of each classroom, four teachers at the school briefly present their own individualized curriculum. It is concluded that only teachers can make an integrated program a success.

6. Burke, J. Children with visual disabilities. In: R. Reger (ed.), Preschool programming of children with disabilities. Springfield, Ill.: Charles C. Thomas, Publisher, 1970, 94-103.

ECE Mainstreaming/Regular Class Placement/Self-Concept/Visually Handicapped

Since many students with visual disabilities are being mainstreamed into the regular public classroom from kindergarten through high school, it is argued that these children with vision problems must be given a preschool program to prevent their being handicapped by their disability when they start school. Since their development is normal, but retarded, their education should begin much earlier. Also, since the child with vision problems will always have to work with special educators and/or teacher consultants, the earlier the special program begins, the more adaptable the child will be.

It is further argued that these special children should be integrated into a preschool program with sighted children, for experience has shown that handicapped children who associate with normal children become more nearly normal themselves. The integrated program helps the partially-sighted child to develop a wholesome self-concept by revealing that he can do many things that other children do. Such early self-confidence wards off school failure and promotes a sense of independence. Parents also benefit greatly from the preschool program, for it gives them confidence in the child's abilities and teaches them in which areas the child needs special help at home. As a final argument for preschool placement of the child with vision problems, a case study is presented about a child who had no preschool experience and who had enormous adjustment problems in kindergarten.

7. Christopherson, J. The special child in the "regular" preschool: some administrative notes. Childhood Education, 1972, 49(3), 138-140.

   Regular Class Placement/Teacher Training/ECE Mainstreaming/Administration Attitudes/Diagnostic Prescriptive Teaching

The preschool laboratory of the University of Montana has integrated children with various handicaps into the regular program for more than 10 years. The director of the school feels that the success of the program has stemmed from three administrative outlooks: 1) to assess the feelings of the teacher toward the integration process before placing the handicapped child in the class, and then to work with that teacher to have realistic expectations for the special child and his parents; 2) to find out from all sources as much as possible about the handicapped child before his schooling begins, in order that his training can begin at the appropriate level and that the necessary plans, equipment and supportive personnel can be provided; and 3) to have first-hand day-to-day contact with the special child and his teacher to make certain that the student is working in the best possible situation the school can offer and to encourage the child and the teacher on a daily basis. If the administrator follows these recommendations, mainstreaming in the preschool can be accomplished more smoothly and effectively.

8. Devoney, C., Guralnick, M.J. and Rubin, H. Integrating handicapped and nonhandicapped preschool children: effects on social play. Childhood Education, 1974, 50(6), 360-364.

   Regular Class Placement/Social Adjustment/Modeling/Behavioral Objectives/ ECE Mainstreaming

PURPOSE: To increase the social play of handicapped preschool children by introducing nonhandicapped children into the special classroom and then by providing structured activities.

SUBJECTS: Seven handicapped children, with a varied range of verbal and emotional handicaps, were permitted to interact three times a week during their free-play period with five nonhandicapped students from the same private preschool program.

PROCEDURE: The seven handicapped preschoolers were studied under three conditions: 1) structured play amongst themselves; 2) unstructured play with the five normal preschoolers; and 3) structured play with the normal children. The seven handicapped children were individually rated on a social play scale, ranging from isolated play to cooperative play, with a rating of six being the highest. Under the same sequence of events, they were also rated as to percentage of time spent in associative and cooperative play. Ratings were carried out by a teacher with an occasional check on reliability by an outsider.

RESULTS: Graphs are presented that show each student's average progress. During baseline conditions, the average play rating stabilized at about three; during unstructured, integrated play, social play slightly improved, but with only one student improving more than one step; during integrated, structured play, a noticeable increase in play occurred, with all children showing significant gains and with the average rate stabilizing at about five. The success of the structured, integrated play is also indicated by the fact that five out of seven children spent 75% or more of their time in associative or cooperative play. An additional benefit observed by the teacher was that when the handicapped children were again left by themselves in their special classroom, they interacted more frequently amongst themselves and modeled their play after that of the more sophisticated nonhandicapped children.

COMMENT: No information was presented about 1) time factors (how long play period lasted or how long the students were studied; 2) the criteria used to rate the students; 3) the method of structuring the play; and 4) the long-range effectiveness of the interaction with the nonhandicapped students; the research design lacked controls. The results obtained, however, suggest that nonhandicapped preschool children can serve as effective models for play behavior to the handicapped children, and the interaction between the two groups produces a substantial increase in both the quantity and quality of play in the handicapped child.

9. Gorelick, M.C. Careers in integrated early childhood programs. Washington, D.C.: U.S. Department of Health, Education and Welfare, Social and Rehabilitation Services, Rehabilitation Services Administration, Grant No. 55-P-45144/9-03.

   Teacher Training/Administration Attitudes/Teacher Attitudes/ECE Mainstreaming

10. Handicapped Children in Head Start Series. Selected readings in early education of handicapped children. Reston, Va.: Council for Exceptional Children, 1974.

ECE Mainstreaming/Educational Planning/Parent Role/Teacher Training

11. Head Start services to handicapped children: First annual report of the U.S. Department of Health, Education and Welfare to the Congress of the United States on services provided to handicapped children in Project Head Start. Washington, D.C.: U.S. Department of Health, Education and Welfare, Office of Child Development, 1973.

ECE Mainstreaming/Legislation/Economics/Physically Handicapped Children/ Supportive Services/Educational Planning

12. Head Start services to handicapped children: Second annual report of the U.S. Department of Health, Education and Welfare to the Congress of the United States on services provided to handicapped children in Project Head Start. Washington, D.C.: U.S. Department of Health, Education and Welfare. Office of Child Development, 1974.

ECE Mainstreaming/Legislation/Economics/Physically Handicapped Children/Supportive Services/Educational Planning

13. Interim report on assessment of the handicapped effort in experimental and selected other Head Start programs serving the handicapped. Lansing, Mich.: Policy Research Incorporated, 1974. Prepared by Syracuse University, Division of Special Education and Rehabilitation.

ECE Mainstreaming/Economics/Individualized Instruction/Administration Attitudes/Teacher Attitudes/Community Attitudes/Parent Role/Assessment Techniques/Special Class Placement/Diagnostic Prescriptive Teaching/ Teaching Strategies/Peer Relationship/Cultural Influences/Curriculum/ Academic Adjustment/Social Adjustment/Legislation/Physically Handicapped/ Mentally Handicapped/Visually Handicapped/Learning Handicapped/Learning Disabled Child/Behavioral Objectives/Labeling/Supportive Services

14. Kirk, S.A. Early education of the mentally retarded. Urbana, Ill.: University of Illinois Press, 1958.

ECE Mainstreaming/Mentally Handicapped/Cultural Influences/ Academic Adjustment

Can intensive educational programs at the preschool level accelerate the rate of development of young mentally retarded children? If such acceleration of rate does occur, will this accelerated rate continue after the preschool period?

Purpose: To provide factual data for or against the general contention that special educational provisions at a young age can alter the rate of development of mentally retarded children. The study tries to isolate certain variables found in the nature of the child, as well as in the physical, social or psychological nurture provided by the environment.

Subjects: Eighty-one mentally retarded children between the ages of three and six, identified and studied for from three to five years. Twenty-eight formed the Community Experimental Group, attending a neighborhood preschool. Fifteen children formed an Institution Experimental Group, attending an institutional preschool, and a third group of 26 children made up the Community Contrast Group. They did not attend preschool but, like the others, were followed-up after entering regular school at age six. The fourth group of 12 children formed the Institutional Contrast Group at a different institution. They did not attend any preschool, but were followed-up after admission to the institution school at the age of six. All children had IQ's between 45 and 80.

Procedure: Case studies of experimental children and statistical comparisons of the two experimental and two contrast groups.

Results: The overall effects of preschool education on the development of young mentally retarded children were positive. Of the 14 cases in the study with organic defects, seven, or 50 percent, accelerated their rate of growth, but 23 of the 29 children with no definitive diagnoses of organic etiology (79 percent) made progress of one or more levels in growth (on the Binet, Kuhlmann and Vineland scales).

Conclusions: Change of rate of growth under optimum education and home conditions would appear to be most effective with the culturally deprived and with the organically impaired culturally deprived cases, and least effective with those with organic pathologies uncomplicated by somatopsychological or environmental factors. Also, preschools for mentally handicapped children may not be necessary, since the Community Contrast Group caught up to the Community Experimental Group after entering regular school at the age of six. The gap between the community and institutional groups, however, grew wider after a year of elementary school.

"No adequately diagnosed educable mentally retarded child has been changed from true mental deficiency to normalcy through educational opportunities, but mentally retarded children can progress in rate of growth to a lesser but still significant degree through the school experience."

Comments: An important early study on mainstreaming, but significance of results is diluted since the subjects were not randomly assigned to treatments, the sample size was small and varied, and other variables, such as specific curriculum and teachers, may have intervened.

15. Latane, J., Sanford, A.R. and Walton, P. Progress report of training inservices to handicapped Head Start children in Region IV. Washington, D.C.: U.S. Office of Child Development, Bureau of Education for the Handicapped, Chapel Hill Training-Outreach Project, 1974.

    ECE Mainstreaming/Individualized Instruction/Regular Class Placement/ Diagnostic Prescriptive Teaching

Progress report on the training of Head Start personnel in the delivery of services to young children with special needs.

Describes the development of the training network, components of the training program, and the project's basic training philosophy to focus on "developing individualized approaches for all students."

16. Lewis, E.G. The case for "special" children. Young Children, 1973, 28, 369-374.

    ECE Mainstreaming/Screening - Early Identification/Supportive Services/ Self-Concept/Social Adjustment/Teacher Attitudes

At the Lexington Nursery and Kindergarten School in Massachusetts, the policy since its opening in 1961 has been to integrate the "special" child into the normal program. In fact, handicapped children comprise 20-30% of the total school enrollment, for many referrals are made from clinics, physicians and social services. All children are accepted, regardless of handicapping conditions, and the 63 special students who have attended the school have included children that suffer from cerebral palsy, physical, verbal and perceptual handicaps, hyperactivity, deformity and emotional problems. After the special child has been accepted, the entire staff meets to discuss the child's background and prepare a program to ease the child into the school experience. Upon entry, the child is placed in a regular class of some 20 students, where there is an accredited teacher and numerous assistants. If particular problems develop, supportive personnel are called in. Most of the handicapped children, however, easily fit into the program, for they are not forced into any frustrating situation by the staff and their

fellow students are used to the special child and do not notice differences. All children are encouraged to experience new activities on an individual basis and to do as much for themselves as possible in order to gain a feeling of self-assurance. Both handicapped and nonhandicapped children seem to grow from this open preschool experience.

17. Luterman, D. and Luterman, C. On integrating deaf children into a hearing nursery. BAEYC Reports, 1974, February, 43-46.

    Hearing Impaired/ECE Mainstreaming/Educational Planning

Congenitally deaf children integrating into a hearing nursery have special needs. They are language deficient. The amount of remaining hearing is not sufficient to enable the deaf child to learn language and understand speech alone, even with the amplification of a hearing aid. Without language, the future and the past are non-existent.

Not all deaf children can benefit from the warm, accepting oral environment of the hearing nursery school. The nursery teachers should be in communication with the child's tutor, parents and audiologist. The integrated deaf child should be the oldest member of the group (a four-year-old with hearing threes) and should be capable of lipreading simple sentences and should have a few intelligible words. Prior nursery experience is also desirable. It is not enough that the hearing children "tolerate" the deaf child - they must interact with him and he must at times initiate activities. The report also includes several specific suggestions for teachers.

18. Northcott, W.H. Implementing programs for young hearing-impaired children. Exceptional Children, 1973, 39(6), 455-463.

    ECE Mainstreaming/Hearing Handicapped/Educational Planning/Teaching Strategies

It is the author's basic premise that it is the inherent right of every hearing-impaired infant to be enrolled in a public school program at the time diagnosis of hearing loss has first been established and the psychological needs of the parents are at a peak. Each child is then assured of an individually-prescriptive program throughout his schooling years. Monitoring by special education personnel insures mobility from one educational setting to another. Deficiencies in the average state school system are assessed against this criterion and suggestions for implementing service delivery systems for hearing-impaired children below the age of three are given. A timetable of events in Minnesota leading up to legislation assuming responsibility for the preschool education of all handicapped children is presented.

The Minnesota program for the hearing-impaired focuses on a) early identification and home training of the infant; b) parental support to prevent secondary social and emotional stress relating to the defect; c) appropriate structures for the regionalization of services throughout the state. A model program in the Minneapolis public schools, called UNISTAPS, offers a replicable service system for training and dissemination throughout the state.

Some dimensions of the Minnesota and the UNISTAPS program: an individual parent teaching program to give parents the confidence and competence to help their children grow; integration of hearing-impaired children into regular nursery schools with tuition paid by the district of residence; individual or small-group teaching as a supplement to placement in a regular nursery school.

19. Northcott, W.H. The integration of young deaf children into ordinary educational programs. Exceptional Children, 1971, 38(1), 29-32.

ECE Mainstreaming/Hearing Handicapped/Supportive Services/Parents' Role/ Individualized Instruction/Labeling/Diagnostic-Prescriptive Teaching

Prior to the age of six, every hearing-impaired child should be given early listening and speaking experiences in two successive educational programs: infant education and home training from birth to age three; and a structured, child-centered preprimary program from age 3-1/2 to six. The earliest educational experience should begin at home with the parents' obtaining professional guidance in developing a prescriptive program of auditory and linguistic stimulation for the child. As a supplement to home training, the child, around the age of 2-1/2, needs to be exposed to social interaction and appropriate normal-child behavior in an integrated nursery school setting. Through group experience with hearing children, the hearing-impaired child is encouraged to think, reason and conceptualize in terms of words. The nursery teacher can also encourage the child to express himself and to learn to store information in terms of language. Finally, the success of the nursery experience will depend upon the involvement and cooperation of parents and special education personnel working with the regular staff. While the child is being encouraged to hear and speak in the nursery setting, this must be paralleled by experiences supplied on a more individual basis by a trained professional. Before permanently leaving the nursery school, each child needs to be given a careful psychoeducational diagnosis and evaluation, for degree of deafness in a child is not the main predictor of success in any particular kind of a program. After an assessment of the adjustment and needs of a particular child, he should be placed in the type of preprimary program that can best remediate his individual problems. If the hearing-impaired child remains in an integrated program, tutorial support should be part of the regular school day and should provide a vigorous learning climate designed by an interdisciplinary team and directed toward school readiness. The initial responsibility of the

tutor is the development of an individual diagnostic profile for the child that indicates learning needs. Then the tutor must work closely with the parents to ensure reinforcement of progress at home and with the classroom teacher to ensure that the special program is relevant to the mainstream education. The long-range goal of these two early intervention programs is to help the hearing-impaired child attain the knowledge and skills he needs to compete effectively in an academic environment and to find personal satisfaction in life.

20. A plan for itinerant educational consultant services for preschool visually handicapped children. 1971, ED 059 553.

Early Childhood Education/Visually Handicapped/Consulting Teachers

A demonstration project was conducted, involving itinerant educational consultant services for preschool visually handicapped children, with the objective of preventing social and sensory deprivation and of developing personal independence. Channels were established for referral of applicable visually handicapped preschool children to the program. Selected preschools for children other than visually handicapped children agreed to admit visually handicapped children and received supportive services to handle the visually handicapped child. Where needed, an itinerant teacher visited the homes of preschool visually handicapped children. For each of the 28 children involved in the study, the birthday, diagnosis, vision, referral and services rendered were reported. The Social Maturity Scale for Blind Preschool Children (Maxfield and Buchholz, 1957) was the standardized evaluation tool used in many cases. Although success was thought to be intuitively apparent in various cases, the complexity of the children's problems precluded definitive measurements of progress in all cases. Appended were four reports by an instructional aide, two mobility students, and a nursery school teacher of their experiences in working with the preschool visually handicapped children.

21. Pollack, D. and Ernst, M. Learning to listen in an integrated preschool. Volta Review, 1973, 75, 359-367.

ECE Mainstreaming/Modeling/Parents' Role/Social Adjustment/Teacher Attitudes/Learning Handicapped/Teaching Strategies

Since hearing-impaired infants can now be fitted with hearing aids, the preschooler with a hearing loss should go to a normal preschool for three very important reasons: he will be encouraged to use his hearing to listen to the natural speech of his peers and his teachers; he will be motivated

to speak himself to be like the other children; he will be exposed to normal-child activities at an early age and will pattern his social behavior after his peers. It is important, however, that the child be placed in the right preschool program: preferably among children of his own age and as the only hearing-impaired student in the group in order to avoid the formation of a nonverbal group of students. The teacher is also vitally important to the success of the special child in the program and must actively structure the verbal environment for his benefit. To aid the teacher who may have a hearing-impaired child in the regular classroom, some basic explanations and suggestions are presented. The development of auditory skills is briefly outlined. The mechanism of a hearing aid is also explained in order that the teacher can check its functioning for the young child and give a correct and simple explanation of it to the other curious children. Ten basic suggestions for communicating more readily with the hearing-impaired child are presented, along with methods of encouraging his verbal interaction and communication ability. Finally, suggestions are given about involving the parents in the whole educational process of the child.

22. Randolph, L. OCD's policy issuance to local Head Start: identify, recruit, and serve handicapped children. Exceptional Children, 1973, 40(1), 46-7, EJ084561.

    Early Childhood Education/Legislation/Early Identification/Regular Class Placement

23. Responding to individual needs in Head Start: a Head Start series on needs assessment. Part I: Working with the individual child. (DHEW Publication No. (OHD) 75-1075). Washington, D.C.: Department of Health, Education and Welfare, Office of Child Development, 1974.

    ECE Mainstreaming/Parents' Role/Assessment Techniques/Prescriptive-Diagnostic Teaching/Academic Adjustment/Social Adjustment

This manual is the first step in an effort to develop a needs assessment kit to provide Head Start staff, parents and others with simple easy-to-use techniques to identify the child's unique needs and capabilities and to respond in ways that enhance the child's development. It is concerned with physical problems, cognitive development, emotional problems, medical information about childhood handicaps and health impairments. A concluding section is on community resources and talking with parents.

24. Sanford, A., Semrau, B. and Wilson, D. The Chapel Hill model for training Head Start personnel in mainstreaming handicapped children. Washington, D.C.: U.S. Office of Education, Bureau of Education for the Handicapped, Chapel Hill Training-Outreach Project, 1974.

    ECE Mainstreaming/Curriculum/Teacher Training

In response to the legislative mandate to mainstream special need children into Head Start programs, this document describes the collaboration between the Chapel Hill Training-Outreach Project and the Johnston County Head Start program.

This project demonstrates the "effects of intensive staff training and prescriptive programming for handicapped Head Start children and their families." It describes staff training programs, resource services, training programs for WIN mothers, a remedial language program and the dissemination of program strategies.

25. Skop, S. The benefits and/or disadvantages of integrated as opposed to segregated pre-school programs for handicapped children. Unpublished dissertation, Department of Education, University of Maine, 1974.

ECE Mainstreaming/Special Class Placement/Self-Concept/Social Adjustment/ Labeling/Teacher Training/Supportive Services

Purpose: An examination of the background and trends in the education of handicapped children and a description of one integrated program for the preschool handicapped and two segregated preschool programs.

Procedures: After initial selection of the programs, based on orientation, philosophy and availability, data was gathered through taped interviews with the three directors and their answers to an interview questionnaire designed to clarify goals, structure and philosophy. Observations of the classes and activities at each project were made, and this data was combined with background information on the history of and current trends and experiements in the field of preschool education for the handicapped, along with an extensive survey of related literature.

Conclusions: Benefits, in terms of personal growth, self-image and adjustment are greater for the majority of preschool children in an integrated rather than in a segregated program.

26. Spollen, J. and Ballif, B.L. Effectiveness of individualized instruction for kindergarten children with developmental lag. Exceptional Children, 1971, 38(3), 205-209.

Curriculum/Early Childhood Education Mainstreaming/Individualized Instruction/Special Class Placement

Purpose: To see whether children in kindergarten with developmental lag in the areas of general development, visual perception, language, and general cognitive readiness can be helped by a program of individualized instruction.

Subjects: Out of 717 middle-income suburban New York City children entering kindergarten, 135 were identified as having developmental lag by a screening instrument devised by the program coordinators. This included items measuring gross motor development, counting, number and color concepts, auditory and visual discrimination, visual motor coordination and body awareness. Ninety-four of these 135 children were placed in an experimental kindergarten to receive individualized instruction. Forty-five went to six different regular kindergartens. An additional 45 non-developmental-lag children in regular kindergarten served as a control group of normals.

Procedure: Each experimental kindergarten class had 12 children, a teacher, and a teacher's aide. (Regular classes had 25 children and a teacher). A monthly plan was developed for each child. At the end of the school year the children were tested again on the screening instrument, the Metropolitan Readiness Test, subtests of the Illinois Test of Psycholinguistic Ability, and the Frostig Test of Visual Perception. Data were analyzed by analyses of variance and covariance.

Results: There were no significant differences between the individualized instruction group and the developmental lag regular kindergarten group. Normals scored significantly higher than either the experimental or control group when tested on the Metropolitan Readiness Test. The authors conclude that the procedures and practices employed in a regular kindergarten were as effective as those of a program stressing individualization of instruction geared to developmental needs. Possible explanations:

- In order to affect differential growth rates, it may be necessary to conduct programs for longer than one year and/or classes for longer than 12 hours a week.
- More specific objectives and curriculum methods and materials may be needed.
- For the non-culturally disadvantaged child, there may be innate differences in developmental rate which contribute substantially to the difference in general readiness level. School curriculums may need a range of objectives and tasks over the entire length of a child's school career to allow for differences in developmental rates. Or possibly a program started when these developmental lag children are three or four and lasting for two or three years might prepare them for the formal school program.

Comment: An excellent study in an under-populated research area. (Controlled for cultural and socio-economic factors.)

27. Swap, M. Integrating children with special needs into regular preschool classes: some guidelines for assessment. BAEYC Reports, 1974, 15(4), 115-124.

ECE Mainstreaming/Educational Planning

There is mounting pressure on preschool resources to accept children with special needs. Many reservations teachers may have about this process can be dealt with by new perspectives on the special child. A deficit or disturbance does not reside inside the child alone, but is a reflection of the expectations of the evaluator, the tasks presented to the child, and that he may be functioning normally a great deal of the time. The challenge is to design classroom environments which will accentuate a child's strengths and provide support for his area of difficulty. Viewing the problem child's special needs developmentally is useful because it bridges the gap between

special and normal children - special children are not children with "deficits," but developmentally-delayed children - and because it gives indications for the design of classroom environments.

The author presents a developmental model which couples the stages in the growth of academic skills described by Hewitt with those in the development of emotional life presented by Erikson. The first three of these stages are relevant to preschool education: 1. The attention-response level (Hewitt) and basic trust vs. mistrust (Erikson). 2. The order level (Hewitt) and autonomy vs. shame and doubt (Erikson). 3. The exploratory level (Hewitt) and initiative vs. guilt (Erikson). For children delayed at each of these levels, the author describes general behavioral characteristics, classroom behaviors, guidelines for teaching strategies, and some suggestions for applications in the classroom.

28. Tait, P.E. Believing without seeing: teaching the blind child in a "regular" kindergarten. Childhood Education, 1974, 50(5), 285-291.

    Early Childhood Education/Visually Handicapped/Teaching Strategies/ Teacher Attitudes/Peer Relationships/ECE Mainstreaming/Curriculum

29. Yule, S. Kindergarten for children with handicaps. Australian Preschool Quarterly, 1963, 4(2), 4-7.

    Teacher Attitudes/Teaching Strategies/ECE Mainstreaming/Peer Relationships

The author discusses the importance of the handicapped child's having as normal experiences as possible, so he can then have the means of building a realistic self-image that enables him to live with his disability and make necessary adjustments and adaptations.

Effect on other children: "...inestimable importance to them as future citizens. (Segregation)...often a cover-up for apprehension and uncertainty about how to interact with people with handicaps.

Effect on child with handicap: arrangements must be made according to the individual needs of the child (which class, amount of time, extra staffing).

The author also discusses a kindergarten program observed in Denmark, whose success she attributed to the outstanding teacher-in-charge, adequate staffing and available supportive services.

30. Anderson, E.M. The disabled schoolchild: a study of integration in primary schools. London: Methuen & Co., Ltd., 1973.

    Regular Class Placement/Peer Relationships/Social Adjustment/Physical Facilities/Supportive Services/Teacher Training/Physically Handicapped/ Mentally Handicapped

31. Arena, J.I. (ed.) Successful programing - many points of view. Selected papers presented at the Fifth Annual International Conference of the Association for Children with Learning Disabilities. San Rafael, California: Academic Therapy Publications, 1969, EC022286.

    Children With Learning Disabilities/Individualized Instruction/ Teacher Training/Parent Role/Educational Planning/Curriculum/Teaching Strategies

Papers presented at the Fifth Annual International Conference of the Association for Children with Learning Disabilities include areas of discussion on the role of parents, teacher preparation and training, screening and diagnosis for learning disabilities, programing for young children through adolescence and summer programs. Additional areas of concern are formulating directions, research and exploration and developments in allied fields. (JM - Abs. from Council for Exceptional Children.)

The section on young children (pages 159-229) deals with: kindergarten children who have learning disabilities; early diagnosis and prevention; remediation; group approaches to early childhood education; and developing an early childhood education program.

32. Beery, K.E. Models for mainstreaming. San Raphael, Calif. Dimensions Publishing Company, 1972.

    Curriculum/Educational Planning/Regular Class Placement/Teaching Strategies

This is a book written for teachers to inform them about various organizational means for mainstreaming. It is presented in a simple, direct, almost children's-book way. Starting with an overview of what happens to the exceptional child in traditional special education -- rejection, institutionalization, segregated classes, referral to outside clinics, remedial classes, resource rooms and personnel - it very briefly touches on such questions as: Have special classes helped children; Have they hurt both teachers and pupils; Do we have the money or the staff to serve all the children who need services in the traditional way?

It outlines three major approaches to mainstreaming: 1. Reassignment. Pull-out programs are discontinued and special children are integrated back into classes with normal children. 2. Prescriptive. Special education

personnel serve as experts who diagnose and prescribe programs for others to implement. 3. Organizational development. The author's preferred way of mainstreaming, it involves increasing the individualization of instruction to answer the needs of all children in integrated classes. Two things are necessary before this can happen: 1. A climate of growth for teachers as human beings and the commitment of the school as a social system to answering the needs of students and teachers. 2. Then a variety of techniques will begin to be effectively used -- task analysis, team teaching, multi-age grouping, peer and cross-age techniques, etc.

A lengthy appendix gives more detailed descriptions of several mainstreaming programs: compulsory reassignment in the Santa Monica School District, the North Sacramento Project, the diagnostic-prescriptive teacher, the helping or crisis teacher, the Madison Plan, the Fail-Save Continuum Model.

33. Colvin, R.W., Zaffiro, E.M. (eds.). Preschool education: a handbook for the training of early childhood educators. NY: Springer Publishing Company, 1974, 362.

    Early Childhood Education/Program Evaluation/Administration Attitude/ Teacher Training/Community Attitudes

A handbook for educators responsible for planning, implementing and evaluating programs for the training of early childhood personnel. It is designed to prepare people to serve in leadership roles. DeVries and Parker explore Piagetian, behavioral and analytic psychologies and their application to child development. Trujillo discusses the community; Peters, Honig, Fears and Dorman discuss programs; Goodwin, Jones and Evans discuss evaluation and measurement; and Peters, dissemination.

The authors feel a great need for new approaches to the education and care of young children and their families.

34. Cowen, E.L., Trost, M.A., Dorr, D., Lorion, R.P., Izzo, L.D. and Isaacson, R.V. New ways in school mental health: early detection and prevention of school maladaptation. NY: Behavioral Publications, 1974.

    Screening/Early Identification

Early detection and prevention of socioemotional and educational problems are the keys to helping every child profit from his school experience. Now the basic tools for mass screening and detection and the means for creating and maintaining optimally effective child-helping programs have been made available through the publication of this new study based on the Primary Mental Health Project (PMHP), developed and tested in the Rochester, N.Y. area for the last 17 years.

New Ways in School Mental Health provides the reader with the concepts underlying the Rochester program and methods used for early identification and prevention of such problems. The book also describes emerging new roles for school mental health professionals and training methods for nonprofessional child aides. It explains how the local community, whose support is critical to the effectuation of such a program, was enlisted and maintained. (Abs. by Behavioral Publications.)

35. Cruickshank, W., et al. Misfits in the public schools. Syracuse, NY: Syracuse University Press, 1969. ED027689.

    Multi-Handicapped Children/Educational Planning/Administrator Attitudes/Teacher Training/Teacher Attitudes

Barriers to effective education of handicapped children and the roles of social agencies in a position to provide a climate for change and innovation are the focus of this book. Administrative ineptitude, unqualified administrators and teachers, poor standards for graduate students, inadequate teacher education and attitudes toward education and change are considered. Thoughts on innovation include educational responsibility, four types of administrators, communication problems, four processes in innovation and the problem of goals. The role of the university in the following aspects of innovation is examined: changes in special education over four decades, the school of education and its curriculum, dynamic planning, teacher selection and the preparation of special education teachers. A discussion of the role of public schools considers attitudes toward children with unusual learning or adjustment problems, self-concept, and means-end and multidisciplinary orientation. Federal support for programs, an idea-oriented climate, a case study of a community, and suggestions for sharing in and organizing for innovation are also discussed. (RP - Abs. from Council for Exceptional Children.)

36. Dunn, L.M. Exceptional children in the schools (2nd ed.). New York: Rinehart & Winston, 1973, EC006026.

The book deals with the major issues in the field of special education, and captures the mood of a field which is in a transitional stage. As a collection of chapters which were written by several different authors, they direct their presentations to regular classroom teachers, as well as to special educators. There is also a general attempt to discuss students in behavioral terms. (From a review by Charles Kokaska in Exceptional Children, 1974, 41(3), 210-11.)

37. Erikson, E. Childhood and society (2nd ed.). New York: Norton, 1963.

38. Hartup, W.W. and Smothergill, N.L. (eds.) The young child: reviews of research. Washington, D.C.: National Association for the Education of Young Children, 1967.

    Peer Relationships/Social Adjustment/Cultural Influence/Early Childhood Education

39. Hewett, F.M. and Forness, S. Education of exceptional learners. Boston: Allyn and Bacon, Inc., 1974.

Academic Adjustment/Educational Planning

An extremely thorough book "about learners, some of whom, by the way, happen to be different or exceptional and placed traditionally into various categories. It is not about rigidly categorized, handicapped individuals, some of whom, by the way, happen to be learners."

The book is divided into four parts: I. Background dimensions: historical origins and contemporary practices. II. Dimensions of difference: determiners, flexibility and sociality, intelligence and individualization. III. Learning dimensions: levels of competence, attention and response order levels, exploratory and social levels, mastery level. IV. Future dimensions: current issues in special education, and the Santa Monica Madison School Plan.

Hewett combines the nine categories of disabilities for much of the discussion, using an index band system to locate all materials with reference to a specific disability.

39a. Hobbs, N. (ed.). Issues in the clarification of children (2 vols.). Washington: Jossey-Bass Publishers, 1975.

39b. Hobbs, N. (ed.). The futures of children. Washington: Jossey-Bass Publishers, 1975.

40. Hyatt, R. and Rolnick, N. (eds.) Teaching the mentally handicapped child. New York: Behavioral Publications, 1974.

Consulting Teachers/Teaching Strategies/Mentally Handicapped/Multiply-Handicapped

This book delineates the role of specialists in a school setting.

It also presents guidelines for the teacher who must utilize the specialist's services as well as direct teaching techniques.

Theoretic_ considerations are skillfully meshed in with "how-to" techniques. It features the application of behavior modification techniques to early language training, and a Piagetian approach to the teaching of mathematics. One chapter deals with the needs of the multiply-handicapped child.

The authors provide information on new developments in chemotherapy, dynamic intervention and educational therapies for the mentally handicapped child.

41. Jacobs, J. The search for help: a study of the retarded child in the community. New York: Brunner/Mazel, Publishers, 1969, ED034361.

Early Childhood Education/Parent Role/Educational Planning/Mentally Handicapped/Family Relationship/Teacher Attitudes/Parent Attitudes

The problems of diagnosis and prognosis of mental retardation are discussed and include the doctor-parent interaction, its nature and consequences, and current outlooks as self-fulfilling prophecies. Aspects of educational programs treated are: referral to available facilities, parent and child background, preschool programs, the retarded as teachers, education after preschool, evaluation of the preschool program by parents, teaching methods, administrative concerns, teacher preparedness, teacher education, and the child's effect on the family. (JM - Abs. from Council for Exceptional Children.)

42. Kirk, S. and Lord, F. Exceptional children: educational resources and perspectives. Evanston: Houghton Mifflin, 1974.

43. Knoblock, P. and Goldstein, A.P. The lonely teacher. Boston: Allyn and Bacon, Inc., 1971.

Staff Relationships/Teaching Strategies

44. Levine, E.A. Lisa and her soundless world. New York: Behavioral Publications, 1974.

Hearing Handicapped/Regular Class Placement/Teaching Strategies

This children's book represents a new approach to teaching non-deaf children about their deaf peers, while at the same time teaching deaf children how they can successfully participate in the social environment. (Abs. by Behavioral Publications.)

45. Love, H.D. Educating exceptional children in regular classrooms. Springfield, Ill.: Charles C. Thomas, 1970.

46. McCarthy, J. and McCarthy, J.F. Learning disabilities. Boston: Allyn and Bacon, 1969.

Diagnostic-Prescriptive Teaching/Learning Disabilities/ Curriculum

This book includes background information, history and definitions of learning disabilities; identification, etiology and eipidimiology, programs, teacher preparation, educational research in the area; information on parent groups and legislation.

Comment: A thorough and carefully-researched basic book on LD, including a list of prescriptive and diagnostic tests for LD.

47. Murphy, P. A special way for the special child in the regular classroom. San Raphael, Calif.: Academic Therapy Publications, 1971, EC041119.

Children With Learning Disabilities/Regular Class Placement

Guidelines for regular class activities in sensory training and academic skills are presented with the intention of helping the underachieving elementary school child. For each area of concentration in class activities, the need for the skill and suggested activities to develop the skill are presented briefly. Concentration areas in perceptual development covered include art activities, auditory training, color discrimination, form discrimination, gross-motor training, ocular control, speech development, tracing exercises, visual-motor coordination, and visual recall. Guidelines for improving reading and arithmetic achievement are also provided. Throughout the book, numerous commercial games and toys are suggested as fun instructional materials for the various skill areas. Appended is a list of 31 commercial outfits making the games and toys suggested and their addresses. (CB - Abs. from ERIC - Early Childhood Education Project.)

48. Orem, R.C. Montessori and the special child. New York: G.P. Putnam's Sons, 1969.

Teaching Strategies/Educational Planning

The book is divided into five sections and an appendix. It consists of articles by various authorities and other material dealing with the Montessori method in the education of special children. I. A brief history of the origin and development of the Montessori method, an inventory of various kinds of special children, and a chart relating Montessori methods to different areas of need. II. The kinship in pedagogical philosophy between Montessori and R. Buckminster Fuller and Jean Piaget is described. III. Articles (emphasizing basic Montessori principles) on vision development, retardation, mathematical illiteracy hearing impairment, and slow learning. IV. Montessori applications and techniques in Special Education. V. Montessori, Research and the Future. Two research studies, a discussion of the relation of Montessori to the new educational technology, and a "Guide to Action" for exploring and expanding Montessori. The Appendix is an edited summary of selected lectures by Montessori to teachers of special children.

49. Piaget, Jean. A child's conception of the world. New Jersey: Littlefield, Adams and Company, 1969.

50. Prescott, D.A. The child in the educative process. New York: McGraw-Hill Book Company, 1957.

Teaching Strategies/Early Childhood Education

This book was designed to help teachers understand the children that they teach, to analyze and interpret their behaviors and needs in a scientific way, using case studies, anecdotal records and a multiple hypothesis approach. It deals with how to obtain, organize and integrate information in a way that helps the teacher to see the development of each child and also to better understand the group dynamics of the class.

51. Reger, R. (ed.). Preschool programming of children with disabilities. Springfield, Ill.: Charles C. Thomas, Publisher, 1970.

Educational Planning/Early Childhood Education

This collection of articles, written by various kinds of educators and introduced by the editor, is intended for all people interested in preschool program development, but it is especially directed to those persons involved in planning the preschool education of children with disabilities. The 13 chapters of the book are divided into five basic categories: 1) identification and evaluation of preschool children with learning problems; 2) stages of childhood development; 3) preschool materials and how to obtain and use them; 4) the needs of children with specific disabilities; and 5) program description and acceptance by parents.

Indicated are facilities, equipment and materials needed to implement a successful preschool program for children with disabilities.

52. Siegel, E. Special education in the regular classroom. John Day books in special education. New York: The John Day Company, Inc., 1969, ED037834.

Teaching Strategies/Regular Class Placement/Learning Disabilities/ Behavioral Objectives/Community Attitudes/Teacher Role/Teacher Training/ Administrator Attitudes/Self-Concept/Emotionally Disturbed/Mentally Handicapped

Designed for regular classroom teachers, the book concerns the minimally handicapped child. Concepts discussed are an introduction to special education and the problems of the mildly handicapped child who is mentally retarded, brain injured or emotionally disturbed, and techniques to aid the teacher with student problems of self-concept, anxiety, attention, organizing, copying written material, coordination, abstract thinking, behavioral problems, and social immaturity. Also included are some additional aspects of the teacher's role, such as assisting in identification, gathering information, using supportive services, participating in training programs, lesson planning, and consulting with parents. The role of the school administrator in supporting the teacher, the child and the program itself and in working with the community is also presented, along with the obligations of teacher-training institutions in teacher preparation and cooperation with the community. References follow each chapter. (LE/JM - Abs. from Council for Exceptional Children.)

53. Stanley, J.C. (ed.). Preschool programs for the disadvantaged: five experimental approaches to early childhood education. Baltimore: John Hopkins University Press, 1972.

Mainstreaming Assessment Techniques/Early Childhood Education/ Culturally Disadvantaged

This volume resulted from the Fist Annual Hyman Blumberg Symposium on Research in Early Childhood Education held at Johns Hopkins in February 1971. Papers were presented by "five leading pioneers" in the development and evaluation of approaches to educating disadvantaged preschoolers. Three reaction papers from the discussion group followed.

"Although the papers differ considerably in content and style, they have as a common theme improving the educational readiness of preschoolers from environments that do not provide the cognitive stimulation most middle-class children receive early in life." (p. viii, Stanley)

The collection of papers provides a good general overview of evaluation studies on preschools for disadvantaged children, comparing different curriculum modes, process variables and product variables. One of the reaction papers (Courtney Cazden, Some Questions for Research...) provides a neat summary of the variables to be looked at in educational research and their interrelationships, using the other symposium papers as examples.

Contributors include Carl Bereiter, David Weikart, Oralie McAfee, Todd Risley, Marion Blank, followed by discussions by Harry Beilin, Lowman G. Daniels and Courtney Cazden.

III. Articles

53a. Abeson, A. Movement and momentum: government and the education of handicapped children - II. Exceptional Children, 1974, 41(2), 109-115.

Legislation

54. Adams, D.M. Helping teachers cope with change. Education Canada, 1974, September, 17-19.

Teaching Strategies/Teacher Attitudes/Curriculum/Supportive Services

55. Ashcroft, S.C., et al. Special feature on the physically handicapped. NEA Journal, 1967, 56(8), 33-48, EC031897.

Physically Handicapped Children/Regular Class Placement/Teaching Strategies

Seven related articles addressed to the regular classroom teacher concern the teaching of children with various physically handicapping conditions. A discussion of regular class placement for children with physical impairments, by Samuel C. Ashcroft, includes general suggestions for the classroom teacher. Following articles contain more specific suggestions of what the teacher can do for the child with speech defects (by Evelyn Young Allen), the crippled or health-impaired child (by Frances P. McGovern), the visually handicapped child (by Lou Alonso), and the aurally handicapped child (by Hazel Bothwell). Recent rapid growth and development of special education programs and specialized services in the schools for handicapped children is noted and commented upon by Maynard C. Reynolds. (KW - Abs. from Council for Exceptional Children.)

55a. Baldwin, C.P. and Baldwin, A.L. Personal and social development of handicapped children. In: C.E. Sherrick, R.N. Haber, W.A. Wickelgren, P. Suppes, E.H. Lenneberg and B.S. Long, V.I. Douglas, C.I., and A.L. Baldwin, J.A. Swets and L.L. Elliott (eds.), Psychology and the handicapped child. (DHEW Publication No. (OE) 73-05000). Washington, D.C.: U.S. Government Printing Office, 1974, 169-185.

Peer Relationship/Self-Concept/Regular Class Placement/Social Adjustment

Discussed are the personality and social development of children with physical handicaps, intellectual difficulties, or social and emotional disturbances, and recommended is the actual observation of the interactions

of handicapped children with others in naturalistic situations. Stressed is the importance of pathological social interactions to handicaps such as schizophrenia and behavior disorders. The authors note a lack of studies of social interaction in naturalistic situations and they examine methodological approaches such as the use of audio or tape and problems such as the choice of variables and interpretation of rating scales. Reviewed is research on interaction patterns in families of schizophrenic patients, with findings such as the "double bind" pattern and differences in affect expression. Also reviewed are studies on the attitudes and social reactions of handicapped and normal Ss. Noted is the need for an effective test of social adaptability to aid in the diagnosis and management of mental retardation. The authors cite research on the self-esteem of handicapped children and indicate that integration with normal children is preferable to alternatives such as institutionalization. (DB - Abs. from Council for Exceptional Children.)

55b. Barnes, E. and Knoblock, P. Openness and advocacy: teacher attributes and behaviors for mainstreaming children with special needs. In: N. Kreinberg and S.H.L. Chow (eds.), Configurations of change: the integration of mildly handicapped children into the regular classroom. San Francisco: Far West Laboratory for Educational Research and Development, 1973.

Teacher Attitudes/Teaching Strategies

56. Barngrover, E. A study of educators' references in special education programs. Exceptional Children, 1971, 37(10), 754-755, EC032710.

Special Class Placement/Teacher Attitudes/Administrators' Attitude

Fifty educators-teachers, administrators and school psychologists were interviewed in March of 1970 on the question of mainstreaming mildly exceptional children. Twenty-seven felt the present program of special classes should be retained. Reasons: it helps teachers by getting slow ones out, there is less disruption in class, and the exceptional child has less frustration, more individual attention, success, help for special deficits and realistic preparation for the work world. Twenty-three favored placement in regular classrooms. Reasons: greater stimulation, better peer behavior models, more group pressure toward good behavior, higher expectations of progress and the failure of present special education classes to meet special needs. They also said that precautions should be taken to maintain the level of quality education for the total group. Suggestions: team teaching; flexibility of grouping, grading, and scheduling; individualization of instruction; and special help from resource people.

Classroom teachers more often favored retention of special classes, whereas nonteaching educators preferred integration. The difference was statistically significant.

Comment: Too little information is given on the attributes and location of the sample.

57. Bereiter, C. An academic preschool for disadvantaged children: conclusions from evaluation studies. In: J.C. Stanley (ed.), Preschool programs for the disadvantaged. Baltimore: Johns Hopkins University Press, 1972, 1-21.

Early Childhood Education/Curriculum/Program Evaluation

Some generalizations about preschool education, based on evaluative research that has been done in the academic preschool for disadvantaged children, more familiarly known as the Bereiter-Engelmann program.

Discusses some of the problems of most evaluation studies of preschool programs which, "with few exceptions compare a single program with a control condition, the control condition usually involving no treatment. Such studies, even when adequately designed to test treatment effects, allow only the most tenuous comparisons between one program and another, because each program is evaluated by a different experiment, in a different location, with a different population, different testers and so on" (p. 2).

The author goes on to discuss five studies which use experimental procedures designed to maximize comparability of results. The five studies included compare open-ended enrichment programs with the highly structured, detailed methods of instruction exemplified by the B-E program.

Sees no reason why early childhood research should stand apart from the main body of research into classroom learning.

Though the more highly structured B-E program consistently produced higher IQ scores, the conclusion reached is that no program by itself makes any permanent difference in the scholastic success of poor children. So long as an effective kindergarten program can overcome differences in the preschool experience, the author feels that compensatory education should not be concentrated in the preschool period, but should be joined to the elementary school curriculum design, and that the "magic years" illusion should be dispelled.

58. Berger, R. A pediatrician looks at the learning disabled child. Health, 1973, 18(8), 7-10, EC051437.

Learning Disabilities

The role of the physician in the identification and treatment of learning disabled children is examined. Preschool identification is seen to depend on the early suspicion of a learning problem based on the medical and developmental history of the child. Learning disability in the school-age child should be suspected when immaturity or behavioral problems are reported. Diagnosis is by the appropriate physician specialist and the educational psychologist. Special education and treatment of the child's emotional disturbance are usually indicated. The use of medication is seen to play a relatively small role in the management of the learning disabled child. (DB - Abs. from Council for Exceptional Children.)

59. Bersoff, N., Kabler, M. Fiscus, E. and Ankney, R. Effectiveness of special class placement for children labeled neurologically handicapped. Journal of School Psychology, 1972, 10(2), 157-163.

Special Class Placement/Mentally Handicapped

Purpose: To measure the effectiveness of special class placement for children labeled neurologically handicapped.

Subjects: Out of the population of neurologically handicapped children in an Ohio county school system offering special classes, three to five hours a week of extra tutoring or regular class placement for such children, three groups were drawn from each program equated on mean age (8 years), IQ, time in program and time elapsed between pre and post-testing. Group sizes were 12, 13 and 17, respectively.

Procedure: Pretesting had been done with the WRAT reading and arithmetic achievement test and the Bender-Motor-Gestalt Test. Post-testing occurred roughly 23 months after pretesting. An analysis of covariance design was used.

Results: There were no significant differences on any of the measured areas.

Conclusions: Design limitations: 1. The special placement group may be more severely impaired than the others and the covariance design may not make up for this. A definitive study needs random placement in treatments. 2. Equivocal results may be the consequence of great within-groups variance in teaching methods, rather than the consequence of differential between-groups treatment. The teaching process must be held constant in studies like this. 3. Students who improved too much may have been lost from the special classes, biasing the results against special classes. Population limitations: The behaviors that supposedly characterize neurologically handicapped children are diverse and contradictory and not mutually exclusive to those children. Evidence on this point is discussed. Hence, results may be poor because no homogeneous diagnostic entity is being studied. This possibility brings up ethical problems for the school psychologist in using the label "neurologically handicapped."

60. Bitter, G.B. and Mears, E.G. Facilitating the integration of hearing impaired children into regular public school classes. Volta Review, 1973, 75(1), 13-22, EC050827.

Children With Learning Disabilities/Regular Class Placement/Early Childhood Education

61. Blatt, B. Public policy and the education of children with special needs. Exceptional Children, 1972, 38(7), 537-47.

Community Attitudes/Legislation/Labeling/Economics

62. Blum, E.R. The now way to know: the Madison Plan as an alternative to special class placement: an interview with Frank Hewett. Education and Training of the Mentally Retarded, 1971, 6(1), 29-42, EC031665.

Administration Attitudes/Regular Class Placement

Taken from a telephone survey of 57 researchers by the CEC information center, the article covers an interview with Dr. Frank Hewett concerning the Madison Plan. Dr. Hewett describes the plan as essentially an effort to create an administrative and instructional framework within which it might be possible to combine several disability groups into a single program, providing them with supportive help through behavior modification, to prepare them for the regular classroom. Interview questions probe such areas as organization, staffing, and facilities, effectiveness, personnel training and guidelines for implementation. (CD - Abs. from Council for Exceptional Children.)

63. Blumberg, L. The case for integrated schooling. The Exceptional Parent, 1973, September/October, 15-17.

Regular Class Placement/Peer Relationships/Teacher Attitudes/Social Adjustment/Physically Handicapped

64. Bowyer, L.R. and Gillies, J. The social and emotional adjustment of deaf and partially deaf children. British Journal of Educational Psychology, 1972, 42(3), 305-8, EJ0 73138.

Hearing Handicapped Children/Regular Class Placement/Social Adjustment

The hypothesis was investigated that partially deaf children have more social-emotional problems than severely deaf children, with the corollary that the policy of placing partially deaf children in ordinary schools might need to be reconsidered. (Authors - Abs. from Council for Exceptional Children.)

65. Bradfield, R.H., et al. The special child in the regular classroom. Exceptional Children, 1973, 39(5), 384-90, EJ071605, EC050802.

Social Adjustment/Regular Class Placement/Mentally Handicapped/ Academic Adjustment

Purpose: To evaluate a model project (the North Sacramento Model Program) integrating exceptional children into specially-taught regular classes.

Subjects: Three educable mentally retarded and three educationally handicapped children were integrated into a regular third-grade class and another similar set of six into a fourth-grade class. Control groups consisted of regular classes and special classes for the educable retarded and for the educationally handicapped.

Procedure: No lecturing was done to the integrated classes. They used precision teaching, a behavior modification technique in which visible rate charts on reading, arithmetic and social behavior were kept on each child. Rewards chosen by the children were used to accelerate the desired behaviors. Some cross-age tutoring by sixth graders was used as well. Pretesting and post-testing after seven months was done with the California Achievement Tests, the Wide Range Achievement Test, the Quay-Peterson Behavior Problem Checklist and a Semantic in Differential-based attitude test.

Results: There were no significant differences between integrated and regular classes on achievement test gains, except that the fourth grade integrated class was higher in arithmetic. Comparison of the exceptional children themselves with their controls in special classes showed third grade educationally handicapped higher in arithmetic and fourth grade educable retarded higher in reading and arithmetic. On the Behavior Problem Checklist there was a significantly greater decline in disruptive behavior for fourth grade exceptional children and third grade educable retarded. There was some evidence of greater positive shifts in attitude as well.

The authors conclude on the basis of this model project that it is indeed possible to maintain the special child within regular class programs and still provide an effective learning situation for all children. The non-handicapped in the integrated classrooms did as well as their controls in regular classes.

Comment: Data on control groups are very poorly presented in this article. The sample size seems very small, too. They report that the teachers were exhausted by constantly trying to construct the individual curricula, so this model may not be a viable alternative to special classes.

66. Braun, S.J., et al. Teachers of disturbed preschool children: an analysis of teaching styles. American Journal of Orthopsychiatry, 1969, 39(4), 609-18, ED043175.

Emotionally Disturbed/Teaching Strategies/Teacher Attitudes/Physical Facilities/Early Childhood Education

A method for analyzing teacher style was developed to isolate systematic characteristics in the way teachers interact with children. Teachers' actions and verbalizations were recorded, as was the degree of responsibility shown toward the child in actions and speech. Two teachers were observed, and their styles are described and compared. Questions raised by the analysis are set forth; the possibility of training a teacher to develop a style consistent with a particular philosophy of therapeutic nursery school is mentioned. (RJ)

66a. Brazziel, W.F. Teachers for little children who are exceptional. In J.B. Jordan and R.F. Dailey (eds.), Not all little wagons are red: the exceptional child's early years. Reston, Va.: Council for Exceptional Children, 1973, 34-46.

67. Brenton, M. Mainstreaming the handicapped. Today's Education, 1974, 63(2), 20-25.

Regular Class Placement/Individualized Instruction/Teacher Training/ Economics/Supportive Services/Legislation/Physically Handicapped

Since 1948, special education for the handicapped has expanded sixfold, but it is estimated that presently only 40% of all handicapped children receive adequate schooling. Yet because of parent power, legislative action and court decisions, a movement is underway to make certain that all handicapped children receive proper education. To meet the needs of all students, many school districts have begun the practice of mainstreaming. It is emphasized, however, that mainstreaming doesn't mean simply transferring handicapped children to the regular classroom. It means identifying the physical and academic needs of the handicapped students, assessing their readiness for integration, restructuring the school's program to meet the needs of each individual student with an individualized plan of study, training the regular teacher to cope with the special problems of all students, and providing all the supportive services required. To provide a valid mainstreamed program is expensive and brings problems of funding. Also, both special and regular teachers and administrators sometimes resist the changes they must make for a program to be a success. Proponents of mainstreaming, however, are very enthusiastic and feel that the integration process will help both the handicapped and nonhandicapped child to adjust and cope with the real world.

68. Brunner, C. Preschool experiences for the disadvantaged. In P.A. Witty (ed.), The educationally retarded and disadvantaged: the sixty-sixth yearbook of the National Society for the Study of Education, Part I. Chicago: University of Chicago Press, 1967, 144-167.

Culturally Disadvantaged/Self-Concept/Academic Adjustment/Early Childhood Education

The preschool years constitute a critical period of life in which there is interpretation of environmental experience and psychological development acting to fashion personality and to determine the extent to which potential can be realized. Young children who live amid economic, social and educational impoverishment have restricted experiences and deficits which often pose insurmountable barriers and result in further retardation when they reach first grade. If, however, intervention occurs by age three or four, the negative effects of the environment can be eliminated or overcome. For this reason, compensatory preschool education programs are highly encouraged to include the following basic learning experiences for the young disadvantaged child: 1) development of a positive self-concept and awareness of the world around him; 2) improvement in communcation as a basic tool of learning at all levels; 3) growth of quantitative thinking and discriminative power; 4) development of physical abilities; 5) respect for property; 6) appreciation of music, art and literature; and 7) insistence on personal cleanliness. The author also sees, as a goal of each program, the involvement of the parent in the child's education, in order that the school experiences of the child can be reinforced at home. Finally, constant evaluation must be performed as the essential basis for directing and redirecting instruction, and continuing records kept to furnish a longitudinal picture of individual progress in the background, health and educational development of the child. Most important, it must be remembered that the preschool enrichment is a beginning and not an end; it is only the first step toward enabling the impoverished child to develop the ideas, skills and language that constitute the raw material for learning, and it must constantly be reinforced throughout his school days.

69. Budoff, M. Providing special education without special classes. Journal of School Psychology, 1972, 10(2), 199-205, EC050044.

Handicapped Children/Regular Class Placement/Administration Attitudes

Discussed is the impetus and logic for maintenance of reintegration of marginally inadequate students in regular class programs. Development of flexible supporting systems is urged to provide for the students' special educational needs and to replace sole reliance on special classes. Nongraded school organization and broad age span, achievement, and ability levels are said to allow for more flexible educational options. Recommended as mandatory are provisions for continuing inservice training and support for teachers and administrators. It is noted that school psychologists can be primarily responsible for formulating strategies for alternative educational plans for marginally inadequate students. (Author/KW - Abs. from Council for Exceptional Children.)

70. Burroughs, R. and Powell, F.W. Can we systematically meet the needs of all deaf children? Peabody Journal of Education, 1974, April, 171-173.

Teaching Strategy/Hearing Handicapped

Points out that literature, as well as experiences of educators, has recently emphasized the vast range of differences within the deaf population. Now we are faced with the need of finding an educational model which will recognize individual differences and maximize each child's chances for optimum growth. The article discusses the Callier Center for Communication Disorders, and its programs for hearing impaired children from birth on, including partial or full integration into classes with hearing students. Callier Center has developed a Systems Approach to individualized instruction. School is viewed as a group of variables which interact with and affect the learner in specific ways, rather than as a set mold through which all children are pushed with the same effect. It allows the school to adjust flexibly to a wide variety of differences and needs.

71. Caldwell, B.M. A decade of early intervention programs: what we have learned. American Journal of Orthopsychiatry, 1974, 44(4), 491-496.

Early Childhood Education/Assessment Techniques/Educational Planning

This article begins by reviewing the developmental stages of Head Start programs. The past 10 years have brought optimism, then skepticism, as the data on the results of intervention started coming in, then disillusionment with programs, techniques and skills. Then came a period of consolidation and regrouping: looking back over what has worked, as well as looking at the problems.

In terms of research, the article brings up the need for greater caution in the future with regard to what offer to measure. True control groups are seldom possible, randomization is impossible. Thus, all of our tried and tested data analysis procedures are, to some extent, suspect in even the best research plans made. The very fact that we cannot always fairly evaluate should serve to temper our promises of what we can accomplish.

"There is no such thing as a free lunch": program expansion is being demanded. Somebody has to pay. We will not be able to pay if we promise too much, because the price will be too high. Hopefully, now that we better understand our role in the total ecology of programs for children and families, we can be more conservative about our potential contribution and, thus, more likely to be found adequate for the task. (p. 496)

72. Caldwell, B.M. The importance of beginning early. In: J.B. Jordan and R.F. Dailey (eds.), Not all little wagons are red: the exceptional child's early years. Reston, Va.: Council for Exceptional Children, 1973, 2-9.

Early Identification/Individualized Instruction/Regular Class Placement/ Diagnostic Prescriptive Teaching/Early Childhood Education

The attitude toward handicapped children has undergone three evolutionary periods. The first one was either to forget the child's needs or to hide him away in an institution as if he didn't exist. The second phase was to identify the handicapped child and then segregate him from normal children by placing him in a special classroom. The current stage is to try and identify the child as early as possible in order to begin the best remediation process in the preschool years. Head Start did much to aid the third stage of development by attempting to screen large numbers of preschool children, identify specific problems, and develop a program to fit all the needs of the individual child. Experience has shown that early intervention is beneficial to the disadvantaged child, with a high positive correlation between extent of deprivation and the child's response to the enrichment program. These facts offer implications for programs for young handicapped children. Regardless of his external surroundings, the environment of the young handicapped child is, by definition, depriving. Since interaction of the child's constitutional and experiential factors are correlated, a program of experiences needs to be structured to help him deal with his handicap at the earliest possible age. Once entered in a structured program, there must always be some means of assessment of the special child to make certain that progress is being made. The author cites examples of personal experiences to show the benefits of a preschool program on handicapped children. One of the main observable contributions of early childhood education for the handicapped is the formation of an attitude of openness and acceptance amongst regular teachers and students.

73. Caldwell, B.M. The rationale for early intervention. Exceptional Children, 1970, 36(10), 717-725.

Early Childhood Education/Educational Planning

Purpose: To trace the antecedents of the current interest in early intervention.

The most significant early interest in the young child came from the educational pioneers of Europe. By the 1920's, kindergartens and university-based nursery schools were no longer rarities. But they remained unrecognized until the 1960's, when the usefulness of early intervention began to be reevaluated by the educational and psychological community. Three associated areas of work stimulated this reappraisal.

- Animal studies on the effects of early experience.
- Developmental studies of children reared in different environments. The author cites research which points to the period of 18 months to three years as the time at which differences begin to appear between privileged and underprivileged children. She mentions research which indicates that it is not the physical environment but interpersonal transactions which can develop or damage.

- Major conceptual analyses of the role of experience in development, which have found that preschool experience increased the IQ's of retarded children between the ages of 3 and 6. The data shows consistency of results with different groups, different pedagogy and different samples. Testing has been done mainly on cognitive variables to the neglect of social and emotional functioning.

At least four obligations need to be met if there is to be significant progress from this point on:

- There must be long-term follow-up into subsequent developmental periods. The author cites a study by Karnes (1969) in which there was a spurt following preschool enrichment, and then a decline in IQ to the same level for the various treatment groups when the children entered first grade. This is the pattern in much follow-up research.

- Changes in school programs may be necessary to consolidate the preschool enrichment gains.

- Careful descriptions of programs are absolutely necessary so that we can understand what interventions we are making.

- Preschool education should not be oversold, as this will result in deleterious disappointment.

74. Carlson, L.B. and Potter, R.E. Training classroom teachers to provide in-class education services for exceptional children in rural areas. Journal of School Psychology, 1972, 10(2), 147-151.

    Teacher Training/Regular Class Placement/Teacher Attitudes

75. Cartwright, C.P. and Cartwright, C.A. Gilding the Lilly: comments on the training-based model. Exceptional Children, 1972, 39(3), 231-4, EC050238.

    Identification/Regular Class Placement/Teaching Strategies/Educational Planning

Proposed are two decision models intended to be followed by regular teachers, with the consultation of special educators, in the identification of handicapped children and in the provision of direct services to handicapped children in regular classrooms. M. Lilly's Zero Reject Model, which proposes regular class placement for all but severely handicapped children and advocates only a supportive role for special educators, is discussed. Explained is an identification model indicating teacher competencies required for the decision making processes of educational placement. Specified are teacher competencies for implementing the diagnostic teaching model, including identifying relevant educational objectives for individual children, selecting techniques for effective classroom management, and choosing special

materials in association with specific strategies. The authors state that the identification and diagnostic teaching models should be part of the preservice training of regular and special education teachers. (GW - Abs. from Council for Exceptional Children.)

76. Cartwright, G.P. et al. Two decision models: identification and diagnostic teaching of handicapped children in the regular classroom. Psychology in the Schools, 1973, 10(1), 4-11, EJ073138.

Early Identification/Regular Class Placement

This paper proposes two models, an identification model and a diagnostic teaching model, that may be used effectively by the school psychologist in his efforts to assist teachers in the identification and educational management of handicapped children. The models are designed to help teachers make intelligent decisions about children in their classrooms. (Author - Abs. from Council for Exceptional Children.)

77. Cazden, C. Some questions for research in early childhood education. In: J.C. Stanley (ed.), Preschool programs for the disadvantaged. Baltimore: Johns Hopkins University Press, 1972, 188-199.

Early Childhood Education

Cazden considers much of educational research in early childhood education as finding answers to questions about the relationships among three variables: 1. the curriculum plan or model; 2. behaviors of teachers and children while the education is taking place (process variables); and 3. measures of child behaviors in situations, called tests, outside the education setting (product variables).

1. Curriculum models -- discusses the comparisons among categorization schemes and how they all fit into the three-category scheme of programmed, open-framework and child-centered. Goes on to discuss the tightening-down of preschool programs concurrent with the opening-up of primary grades. Also notes that in actual pre-school practice, explicit statements of objectives are rare.

2. Process variables -- descriptive research on what teachers and children actually do in the classrooms: implementation of model, the "expressive" objectives of encounters that they want children to have, rather than behavioral outcomes they want them to achieve; also seen as critical for understanding the relationship between what children do and what they learn. Few good process descriptions are available, according to Cazden.

3. Product variables -- everyone agrees to the need for ways to assess a wider range of effects of educational environments on children. Lists some of the more commonly used product tests.

78. Christoplos, F. and Renz, P. A critical examination of special education programs. Journal of Special Education, 1969, 3(4), 371-381.

Regular Class Placement/Special Class Placement

It is necessary to reevaluate the purposes of all types of segregated classes for exceptional children. Unfortunately, the creation of special classes was developed more to allow educators to reach the goal of teaching normal children than to aid the child in need of special help. Once established, the special class became institutionalized and difficult to eliminate. In fact, little effort has been made to identify behaviors that the segregated child must master before reentry into the regular program and, as a result, once placed, the special child usually remains in the self-contained classroom. Even worse, the continuation and expansion of special classes have often been caused by special educators motivated by self-perpetuation. Even though there is evidence of the harmful effects of segregation on special students (low self-concepts, poor parental attitudes, unqualified teaching, lack of preparation for life outside of school), their integration into the regular classroom has been resisted on the argument that their integration would be detrimental to the normal students. In reality, there is no reliable evidence to prove that harmful effects on the normal students resulted from an integrated classroom; yet a review of studies reveals many beneficial attitudinal effects on both the handicapped and non-handicapped student in the regular classroom. In a system of education based upon democratic principles, segregation of any type should not exist, for it prevents the development of a spirit of cooperation. The exceptional child, therefore, should remain in the regular class, and special help should be given only through resource teaching.

79. Christoplos, F. Keeping exceptional children in regular classes. Exceptional Children, 1973, 39(7), 569-572.

Regular Class Placement/Self-Concept/Individualized Instruction

Due to financial difficulty and the failure to produce results, special classes for exceptional children are being abandoned and the special child is being kept in the regular classroom. Hopefully, the exceptional student will profit from the process of integration by positively changing his own self-concept and the attitudes of others toward him. Teachers must adopt more effective techniques of dealing with individual problems. One approach to facilitate integration is to make use of interstudent tutoring, where a stronger student helps a weaker one. Such a system frees the teachers to work as supervisors for all the individual programs of learning, provides the ideal one-to-one relationship in the learning experience, fosters cooperative attitudes among the students, avoids rigid classification by ability, and provides totally individualized instruction designed and overseen by the teacher, but administered by a peer. Tutoring has been found to improve the achievement of both the tutor and the student, but it is truly to be geared to an individual's needs, the teacher needs to break learning tasks into their smallest components and put them into proper

sequence. The tutor keeps records of the student's performance in order that teacher, tutor and tutee can evaluate the learning progress at all times. Any standard assessment should be frequent and should be used to decide what tasks should be performed next and what student can best serve as tutor. In summary, the benefits of tutorial teaching over diagnostic/prescriptive teaching as it is usually conceived are pointed out.

80. Conine, T. and Brennan, W.T. Orthopedically handicapped children in regular classrooms. Journal of School Health, 1969, 39(1), 59-63, EJ000781.

    Physically Handicapped/Regular Class Placement

81. Cooper, E.S. and Ingleby, J.D. Direct observation in the infant school classroom. Journal of Child Psychological Psychiatry, 1974, 15, 263-274.

    Early Childhood Education

A study designed to investigate the behavioral characteristics of first-year school children who received favorable or unfavorable overall ratings from their teachers, and to contrast behavior patterns in different types of schools. The children were observed directly, with the use of video recordings. Since this is a comparatively undeveloped method, much of the report centers on the techniques of filming and coding that were adopted.

82. Cornacchia, T. and Spenciner, L. Camp program for preschool children with auditory and visual handicaps. Educationally Visually Handicapped, 1969, 1(3), 88-89.

    Multi-Handicapped/Hearing Handicapped Children/Visually Handicapped Children

83. Dailey, R.F. Dimensions and issues in 1974: tapping into the special education grapevine - mainstreaming continues to be a major issue. Exceptional Children, 1974, 40(7), 503-4.

    Regular Class Placement/Teacher Training/Legislation

84. Daniels, L.G. Variables that may be useful when evaluating day care programs for preschool children. In: J.C. Stanley (ed.). Preschool programs for the disadvantaged. Baltimore: Johns Hopkins University Press, 1972, 182-187.

    Early Childhood Education/Program Evaluation

Daniels agrees with Bereiter that the issue is not how young children should be taught, but whether. He sees the raising of preschool children's IQ's as acceptable, if the chief purpose of the day care program is to assure scholastic success in regular elementary school and he emphasizes:

1. the importance of integrating nursery goals with local elementary school goals;

2. the importance of using purpose as a variable for evaluating a day care program, which produces honesty in criticism.

Daniels also suggests further exploration of tutoring as one way of helping preschool children with adjustment or learning difficulties.

Comment: very general and theoretical; summary response to reports; no new information.

85. Denhoff, E. Precursive factors to early and identified learning disabilities. Slow Learning Child, 1972, 19(2), 79-85, EC050561.

Learning Disabilities/Early Identification

Outlined are prenatal and perinatal factors contributing to later learning disabilities and the role of the pediatrician in early identification and remediation of such problems. Five categories of factors contributing to make an infant potentially susceptible to later learning disability are identified: low birth weight, dysmaturity, respiratory distress syndrome, high bilirubin level and hemolytic syndrome. The importance of preschool evaluation when potential learning disability is suspected is stressed, but teacher/physician disparity in assessment is noted (the teacher assessing functions and the physician dealing in pathology). The physician is urged to better prepare himself to evaluate functions and skills related to academic performance. Recommended for a preliminary screening evaluation are body measurements and assessment of gross motor skills, fine-patterned movements, sensory functions, sensory-integration and complex integration. (KW - Abs. from Council for Exceptional Children.)

86. Deno, L.E. Special education as developmental capital. Exceptional Children, 1970, 37(3), 229-40.

Regular Class Placement/Staff Relationships/Educational Planning

The author proposes that the field of special education changes its focus from a "curriculum and instructional resource" to an instrument whose primary task is to facilitate change within the educational system. Special educators, as agents of change, would be better able to meet the learning needs of exceptional children. Several means of accomplishing this task are suggested:

- a non-categorical approach to providing special education services.
- combining special education and regular education to create one administrative unit.
- focusing on identifying the variables which determine the effectiveness of a special education program.

87. Dunn, L.M. Special education for the mildly retarded -- is much of it justifiable? Exceptional Children, 1968, 35(1), 5-22.

Supportive Services/Individualized Instruction/Self-Concept/Regular Class Placement/Labeling/Social Adjustment/Cultural Influence

The author proposes that, too frequently, special education classes have been used as the acceptable place to transfer "misfits" from the regular classroom. As a result, 60 to 80% of pupils taught by special education teachers are slow-learning children from low-status backgrounds. It is now necessary to stop labeling these mildly-handicapped students as mentally retarded and segregating them into special programs. It is education's responsibility to take these misplaced children out of special classes and put them back into the mainstream of the school so that they can grow to their full potential and so that special education programs can effectively reach the moderately and severely handicapped children who desperately need special help. There are five basic reasons why the slow-learning child can profit from participation in the regular class: 1) heterogeneous grouping aids the slow learner by giving him normal peer models; 2) efficacy studies by Kirk (1964), Hoelke (1966) and Smith and Kennedy (1967) revealed that retarded and handicapped pupils make as much or more progress in regular classes as they do in special education; 3) diagnostic procedures are usually inadequate to correctly identify a child's special needs, and, when something is found wrong with a child, diagnosis tends to stop so that he can be placed in special education; 4) disability labels work to the disadvantage of the child, for the teacher expects less of a child labeled as handicapped and the child himself has feelings of inferiority and problems of acceptance; 5) regular programs are now better able to deal with individual difference in pupils because of changes in basic school organization, which allow more flexibility, curriculum changes involving individualized teaching, changes in professional public school personnel, including more specialists, and use of sophisticated equipment, which allows more individualization. Major changes, however, will have to be made in the basic educational program when these mildly-handicapped children are put back into the mainstream. Most importantly, specialists must work with these students in order to diagnose their disabilities and prescribe an effective individualized educational program. After the child is back into the mainstream, he must always have access to supportive personnel (resource and/or itinerant specialists), who are equipped to aid in the remediation of the special problem. Master teachers will have to be used to develop new materials to aid all students, and especially the exceptional child, in the regular classroom. Programs in motor development, sensory and perceptual training, cognitive and language development, speech and communication training, personality development and social interaction must be provided for the special child. All of these are serious tasks, but if the administrator, the special education teachers, the regular class teachers and the supportive specialized personnel work together, the change from special classes to a mainstreamed program can be a smooth and rewarding experience for the misplaced, mildly-handicapped child.

88. Dusek, J.B. Implications of developmental theory for child mental health. American Psychologist, 1974, 29(1), 19-24.

89. Edgington, R. Public school programming for children with learning disabilities. Academic Therapy Quarterly, 1966-67, 2, 166ff.

Resource Rooms/Learning Disabilities

90. Evars, E.D. Measurement practices in early childhood education. In: R.W. Colvin and E.M. Zaffiro (eds.), Preschool education: a handbook for training of early childhood educators. New York: Springer Publishing Company, 1974, 283-343.

Early Childhood Education/Assessment Techniques

"A selective overview of contemporary measurement practices in early childhood education selecting and evaluating techniques" -- a thorough and carefully-researched discussion of measurement techniques useful with preschoolers.

The article discusses the fact that there have been few techniques that are both valid and practical for widespread use that could be termed innovative, but that the range of measures has increased, especially language and affect tests, as well as tests of achievement motivation and self-esteem. The article also notes the increase in observational techniques and the more inclusive pre-screening of children.

Evans reminds the reader of three important consideration: academic or cultural bias of tests - a problem of test validity; the general impact of testing on students; and the ethical use of test results (i.e., labeling).

90a. Evans, J.S. Classroom planning for young special children. Teaching Exceptional Children, 1972, 4(2), 56-62.

Early Childhood Education/Physical Facilities

91. Fine, M.J. Clearinghouse: attitudes of regular and special class teachers toward the educable mentally retarded child. Exceptional Children, 1967, 33(6), 429-30, EC020426.

Mentally Handicapped/Special Class Placement/Teacher Attitudes/Social Adjustment/Academic Adjustment

To study the differences between 21 regular and 13 special class teachers in attitudes and expectations toward the educable mentally retarded child, teachers were asked to answer questions concerning children's behavior in the classroom and their expectations of the children. The first question asked the teachers to rate the following in order of importance: good citizenship, social adjustment, reading achievement, personal adjustment and academic performance. The second question was a ranking of the statement as to whether children of lower ability would do better if made to try harder. The findings depict the special class teachers as placing greater emphasis on personal and social adjustment factors than do regular class teachers. Also, the special class teachers appear to be less demanding than regular class teachers for low-ability children to try harder. A possible conclusion is that special classes are understimulating the retarded child ir the area of academic achievement. (LE)

92. Flynn, T.M. Regular-class adjustment of EMR students attending a part-time special education program. Journal of Special Education, 1974, 8(2), 157-67.

Regular Class Placement/Social Adjustment/Teacher Attitudes/ Individualized Instruction/Mentally Handicapped

93. Forness, S.R. Implications of recent trends in educational labeling. Journal of Learning Disabilities, 1974, 7(7), 445-449.

Labeling/Supportive Services/Learning Disabled/Academic Adjustment/ Regular Class Placement

This article discusses the shift in special education away from traditional labels with their well-defined, mutually exclusive categories, setting up a single category of special education, such as "children with exceptional needs."

Some reservations the author has about this trend include:

- Less attempt to develop special approaches and materials.
- There is no compelling reason to believe that, because some categories of exceptional children will benefit (e.g., mentally retarded), learning-disabled children will benefit as well.
- The same misconceptions and biases that laymen hold for the mentally retarded and emotionally disturbed might generalize to learning disabled children as well.

Advantages the author sees in the trend include:

- Advances in one area of exceptionality will spread more rapidly to other areas.
- There will be an increase in the efficiency of use of the limited resources available to special education.
- The child with multiple problems will have all his needs met instead of being pigeon-holed into one category of exceptionality and its particular services.
- Time and money spent in classifying and diagnosing will be used in more productive ways.
- Resources that are tied up in full-time special placement of a child who only needs limited services will be freed.

The traditional roles of ancillary professionals such as psychologists, pediatricians and medical specialists will be de-emphasized as educators become less concerned with diagnosis and etiology and more concerned with optimal curriculum materials and motivational approaches. The production of special education "generalists" will be no easy matter. Federal monies for training continue to be funneled through categorical channels. The transition can be expected to proceed quite unevenly. Inservice efforts to broaden the training of categorically-prepared teachers already in the field to create variability in credentializing and standards.

94. Forness, S.R. The mildly retarded as casualties of the educational system. Journal of School Psychology, 1972, 10(2), 117-126.

Regular Class Placement/Teaching Strategies/Mentally Handicapped

It is the thesis of this article that a substantial number of children might never have had to be placed in EMR classes if certain moderate changes could have been made in their educational environment in the regular grades. 1. Current findings on situational and motivational variables in the instruction of the mentally retarded should be made available to regular class teachers. 2. Comprehensive screening programs early in the school years, if necessary based simply on guided teacher judgments, might prevent months or even years of frustration and failure and the setting in of negative attitudes. 3. Reinforcement in the regular classroom is frequently for behavioral control, rather than as motivation to learn. Given large classes, attention from the teacher, whether for good or bad acts, is often reinforcing. Intentional use of encouragement with mildly retarded children in their early school years might develop positive "learning sets." 4. A substantial number of teachers are inadequately prepared to teach normal children. The person most available to them for help is the principal, but he is also the person who has to evaluate them for tenure. A splitting of the evaluative and supervisory functions of the principal and a switch in the school psychologist's role from testing to teacher consultation are recommended 5. Although the goal should be to return the EMR child to regular classes, there is a tendency for him to remain in special classes. This is partly because of a lack of middle ground between the regular grades and the self-contained segregated classes. A continuum of service structures should be built between the two.

95. Frick, E. Adjusting to integration: some difficulties hearing impaired children have in public schools. Volta Review, 1973, 75(1), 36-46, EC050831.

Regular Class Placement/Hearing Handicapped Children/Social Adjustment/ Academic Adjustment

Considered are the major academic and social difficulties that hearing impaired children integrated into public schools are seen to have at different levels (first through twelfth grades). Most of the children are reported to

have some difficulty in academic areas and have the greatest problems at the higher levels. It is recommended that hearing impaired children be taught independence, accepted social behavior and world happenings. Good speech, lipreading and study habits are seen to be necessities for successful integration. Careful integration is suggested before regular or special placement of children with doubtful abilities. (DB - Abs. from Council for Exceptional Children.)

96. Gallagher, J.J. Planning and evaluation. In: J.B. Jordan and R.F. Dailey (eds.), Not all little wagons are red: the exceptional child's early years. Reston, Va.: Council for Exceptional Children, 1973, 104-112.

Behavioral Objectives/Educational Planning/Assessment Techniques/ Curriculum

Educational evaluation is a useful tool only when it is part of a total model of decision making. Since decision making is very important to educational programing, all of its components should be understood by those involved in planning. A decision in education begins with initial planning elements: the needs of the student must be considered, then a goal must be set in broad terms, and finally a series of objectives, specific expected results, must be planned to work toward the goal. Next the constraints and resources, such as staff and materials, must be considered in terms of feasible objectives. Before deciding on the final program, alternative strategies must be considered, to make certain that the choice is the best available to produce the desired results. Once the decision has been made and carried out, evaluation must be considered in terms of the objectives, in order to determine if the program has had some impact and in terms of favorable and unfavorable side effects. Also, evaluation should be subdivided into process and product evaluation and formative and summative evaluation. In addition, feedback should be sought from relevant people, such as parents, administrators, teachers and students. Although most educators think of formalized tests as the standard evaluation measures, there are many other simple and useful evaluations, such as counting the number of responses or keeping anecdotal records, which can be of help to the decision maker in a formative evaluation.

97. Gallagher, J.J. The special education contract for mildly handicapped children. Exceptional Children, 1972, 38(7), 527-535.

Mentally Handicapped/Regular Class Placement/Labeling/Parent-School Relationship/Teacher Attitudes/Teacher Training

Two basic problems are facing special education: the return of the mildly handicapped child into the regular classroom after having been assigned to special classes; and the overassignment of minority-group children to special education. Too frequently, educators argue that the root of these problems exists in labeling the child. The author feels, however, that the inability to create an educational program that produces definitive benefits for the EMR children is the root issue. The pattern has been to label the child and permanently place him in a special education class; less than 10 percent of special classroom students ever return to the regular

program. There is simply no bridge between special and regular education. Labeling, however, is not the cause of the gap and, in fact, there are many needs for labeling. It is the standard first step in providing needed services to treat the child's problem. Because of labeling, large amounts of money have been specifically appropriated for research, education, teacher training and rehabilitation services for the mentally retarded. If the labels were removed, financial resources for the handicapped would dissipate. If the labels are going to be used, a change must be made to counteract the obnoxious elements that are often produced by the labeling process. The solution seems to be in the establishment of a special education contract between parents and educators, who would decide on specific goals for the child leaving the mainstream of education.

The contract, composed after a careful educational diagnosis, would commit the special personnel to measurable objectives that would be upgraded on a six-month interval. Ideally, the contract should begin as early as age three, be made for a maximum period of two years and be renewed only under a quasi-judicial type of hearing, with parents represented by a child advocate counsel. The advantages of the contract system are multiple: 1. the child could not be placed in special education without the parent's knowledge; 2. the child could not stay in special education for more than two years without the parents' consent; 3. the child would be given specific objectives that would help him when he is returned to the regular classroom; 4. the regular classroom teacher, involved in mainstreaming, would take an interest in the remedial program; 5. the special educator, who would be more accountable to parents and professional peers than before, would be made to create realistic and meaningful objectives and to work with the child to reach those objectives. The author finally makes two warnings: the contract program will only be as good as the teachers involved; and the proposal needs much field testing to assess the feasibility and effectiveness of contract teaching. In conclusion, the author anticipates six basic questions about his proposal and gives his answers to them.

98. Garrett, C. and Stovall, E.M. A parent's views on integration. Volta Review, 1972, 74(6), 338-44, EJ061400, EC042672.

Hearing Handicapped Children/Regular Class Placement

The interview with the mother of a 14-year-old deaf girl points out the educational development of the girl after she was placed in a regular school. (CB - Abs. from Council for Exceptional Children.)

99. Glass, R.M. Doing special education versus being a special educator. Viewpoints, 1973, 49(1), 51-71, EC051004.

Regular Class Placement/Teacher Training/Teaching Strategies

Discussed is the need for an interface between regular and special education in terms of the trend toward regular class placement of the mildly handicapped child and the many educational methods common to both fields. Strategies seen to be useful for both normal and handicapped children are considered. It is felt that the child with behavior problems can be effectively helped by well-behaving peers. The use of behavior modification techniques with behavior and learning problems is recommended. Also suggested is the use of different modalities of learning and the use of magic circles for discussion and fostering of positive teacher/pupil relationships. The use of problem learners to tutor younger children is encouraged, as is the extension of the educational continuum by offering more freedom at one end and more structure at the other. Better mental health for all children is seen to be fostered by the use of special strategies in the regular classroom. Inservice training programs are recommended which would stress practical solutions to teaching learning problems. Suggested for preservice training are special education modules within regular methods courses and the possible integration of the special education major with the regular education major. (DB - Abs. from Council for Exceptional Children.)

100. Grosenick, J.K. Assessing the reintegration of exceptional children into regular classes. Teaching Exceptional Children, 1970, 2(3), 113-9, EC023122.

Emotionally Disturbed/Regular Class Placement/Behavioral Objectives

In a study of the reintegration of exceptional children into regular classes, the stages involved were determining whether children were ready for reintegration, preparing them for the change, assessing the initial effect of the change, and doing follow-up observation. Measurement techniques involved using behavioral observation for diagnosis, recording daily progress, and creating cumulative records. A study was run of behaviors (hand raising, leaving seats, talking out and teacher response) before and after integration, with the conclusion drawn that special students were successfully integrated, and their placement did not significantly affect the regular class students. Due to the brevity of the study, little significant information was gained from the socio-metric measures of class play, incentive orientation and locus of control. (JM - Abs. from Council for Exceptional Children.)

101. Guralnick, M.J. A research-service model for support of handicapped children. Exceptional Children, January 1973, 39(4).

Early Childhood Education/Behavioral Objectives

The trouble with educational research is that research problems require carefully-controlled situations that often interfere with the delivery of services, which should be the primary goal of education. However, with

careful design and direction, research can benefit the efficient programing and effective delivery of services. After an explanation of weaknesses in past educational research design, a model is described in which both research and service goals can be achieved concurrently in a preschool intervention program. Attention in this model is focused directly on a detailed analysis of the environmental effects on each individual child's behavior, while multiple baseline procedures are applied to establish cause and effect relationships. The instructional program must be broken down into specific units containing a detailed procedure and a defined behavioral goal. As each unit is being taught to an individual child, it will be assessed by the teacher on the basis of the behavioral criteria. If the unit is ineffective in obtaining the desired response for any reason, it is revised and administered again. When the program meets with success with one child, it is administered and evaluated with other children and often by a different teacher, until there is confidence in its efficacy. Because the procedure has been designed to rule out extraneous factors, such as time lapse and attention to target behaviors, answers to research questions are easily obtainable, for statements can be made about causality. Dealing with variabilities in students' performance is discussed at some length, with the conclusion that there is not an absolute answer to how much student variability is tolerable. Variables relating to program administration and long-term goals are not testable in this model. The benefits of this design are the reduction of guesswork in identifying most variables and allowing the teaching staff to carry out many of the research procedures without affecting their teaching effectiveness. Moreover, the program focuses on the process of learning, rather than the product, while the effects of instructional inputs upon each discriminable unit of the procedure are carefully examined.

102. Hagger, D. Specific learning difficulties and deaf children. Australian Teacher of the Deaf, 1972, 13(1), 13-19, EC050375.

Hearing Handicapped/Learning Disabilities/Early Identification/Multi-Handicapped

The article considers incidence and differential diagnosis of learning disabilities in hearing impaired children. Problems related to diagnosing a learning disability in a deaf child are identified. Focused upon are the special difficulties of diagnosis in a preschool child and the difficulty in distinguishing aphasia or autism from deafness, and vice versa. For teachers who suspect that a student may not be deaf after all, several suggestions are made to help distinguish the behavior of a deaf child from that of an autistic or aphasic child. (KW - Abs. from Council for Exceptional Children.)

103. Hamm, N.H. The politics of empiricism: research recommendations of the Joint Commission on Mental Health of Children. American Psychologist, 1974, 29(1), 9-13.

104. Hammons, G.W. Educating the mildly retarded: a review. Exceptional Children, 1972, 38(7), 565-570.

Regular Class Placement/Special Class Placement/Learning Disabilities

A review of the controversy over the education of mildly handicapped children is presented. The author feels that Dunn's 1968 article, "Special Education for the Mildly Retarded--Is Much of it Justifiable?," was only part of a long series of disenchantments with special educational structure, and its main contribution was to focus attention on some of the real problems. To give an historical perspective and to show that Dunn was not the first to question special classes, six articles are reviewed that were published prior to 1968; all of them emphasized that special children could receive effective education in the regular classroom. The reception that Dunn's article received indicated the great dissatisfaction with the practices of special education. Five articles are reviewed that support Dunn's opinion that special classes for the mildly handicapped should be abolished. Dunn's article also stimulated a renewed interest in efficacy studies, and three of these articles are mentioned. Finally, Dunn created a controversy over the questions of stigma and labeling for the special child, and five articles on this topic are cited. There are educators, however, that do not agree with Dunn's basic principles and feel that the problems in dealing with special education are far more complex than appearances indicate; Dunn's critics argue that even though studies have shown that special classes have deficiencies, no studies are available to show that mainstreaming is efficacious. Finally, five articles are cited that maintain the real concern in special education should only be in finding what is best educationally for the special child and what system of grouping is best suited to further the educational goals of each individual student. In conclusion, it is emphasized that professionals involved in special education must recognize that a controvery does exist, reckon with the forces of change, and channel all efforts to the improvement of education for all handicapped populations.

105. Hartup, W.W. Peers as agents of social reinforcement. In: W.W. Hartup and N.L. Smothergill (eds.), The young child: reviews of research, Washington, D.C.: National Association for the Education of Young Children, 1967, 214-228.

Student Attitudes/Social Adjustment/Peer Relationships

This article reviews a series of studies done by the author and his associates on the capacity of peers to influence the performance of children through contingencies of reinforcement.

An observational study of positive social reinforcement among three and four-year-olds revealed that there was more reinforcing among older children. The more reinforcement that was given, the more that was received. Sixty-five percent of peer reinforcements occurred during dramatic play. A study of limitation showed that children who were generally socially rewarded imitated a rewarding child more, while children who generally received little reinforcement imitated a non-rewarding child more.

106. Hemmings, I. A survey of units for hearing-impaired children in schools for normally-hearing children. Teacher of the Deaf, 1972, 70(416), 445-466, EC050378.

Hearing Handicapped/Special Class Placement/Teacher Attitudes/ Peer Relationship

A selective survey was conducted of units (special classes) for aurally handicapped children in schools for normally-hearing children in England. Findings showed that size of unit, degree of handicap accepted and amount of time spent in regular classes varied considerably. Perception of units' role also varied: some were regarded as a means toward the integration (social, academic, or both) of deaf and hearing children, while other units did not see this as a goal of overriding importance. Relationships between unit and associated main school were usually, but not always, harmonious. Regular teachers varied in the extent to which they felt they should be, and were, involved in the unit children's school life. Friendly and cooperative relationships between deaf and hearing children were influenced largely by the children's individual personalities, although other factors, such as certain integrated classes, were also helpful. Some, but not all, regular teachers gave special help to their deaf pupils. Various complaints and recommendations were made by teachers. (Author/KW - Abs. from Council for Exceptional Children.)

107. Iano, R.P. Shall we disband special classes? The Journal of Special Education, 1972, 6(2), 167-77.

Labeling/Social Adjustment/Diagnostic Prescriptive Teaching/Special Class Placement/Regular Class Placement/Parent-School Relationship/ Academic Adjustment/Mentally Handicapped

In recent years, special class placement has been severely criticized by some educators who believe that traditional diagnostic procedures, labeling by disability categories, and segregation from normal peers are harmful to the exceptional child. Other educators insist that special classes for the educable mentally retarded be continued, for they believe that these children are considerably below chronological age standards in skills, achievement and capability and, therefore, need special teaching methods and educational goals. They also argue that if the special child

remains in the regular classroom, he is not accepted by his peers, and his problems are compounded. The author investigates and evaluates each of these arguments for special class placement of the educable mentally retarded student. Studies are cited which indicate that when students, both normal and retarded, are matched for mental age, they perform similarly on learning tasks, a finding which indicates that EMR students do not necessarily have learning disabilities; other studies have shown that many average IQ students have special areas of learning disabilities. The solution, then, seems to be to identify children who need special instruction through a diagnosis of learning difficulties, rather than to give an intelligence test, the results of which are the criterion for special class placement. Furthermore, it seems unwise to separate any group of children from the mainstream in elementary school, for special children are likely to benefit most from a general educational program adapted to their needs and abilities, but with freedom of exploration and experience. Studies on the social position and achievement of the EMR children in the regular elementary classroom, however, have found that they are socially rejected, do not participate in group learning activities, and have a low rate of achievement; however, their isolation and poor performance is probably caused by the fact that the EMR child is considerably below grade level and cannot compete with the average child. If, at the elementary level, there were nongraded systems with flexible grouping, the educable mentally retarded children could learn with students of their own educational levels and be accepted by them. By high school, EMR students probably need a program that is socially and vocationaliy oriented; however, the special student should be counselled, not coerced, into such a program, which would not be labeled according to an IQ level, but which would be open to anyone interested in those two areas of development. Other alternatives to the special class patterns are briefly reviewed and the problems of identification in a more flexible system are discussed. Finally, the education of other categories of disabilities are considered; it is concluded that the use of special classes for any of the mildly handicapped categories is inappropriate.

In summary, the author emphasizes the need for three changes in the general education system if it is to integrate the special child in a beneficial manner: 1. greater interaction and cooperation between special and general educators must be developed; 2. teachers must be given the responsibility for a child's placement in a class or program, rather than leaving that decision up to a score on an IQ test; 3. the traditional age-grade placement of students must be abolished and replaced with a flexible, nongraded system.

108. Iano, R.P., Ayers, D., Heller, H., McGettigan, J.F. and Walker, V.S. Sociometric status of retarded children in an integrative program. Exceptional Children, 1974, 40(4), 267-273.

Social Adjustment/Supportive Services/Peer Relationships/Mentally Handicapped/Regular Class Placement/Resource Room

Purpose: To determine the sociometric status of former special class educable retarded children who had been integrated into regular elementary school classes and had supportive resource room services made available to them.

Subjects: Three elementary schools in Philadelphia converted to a resource room integrative program in 1970. All students in classes containing former special class educable retarded (mean) IQ 50-60, were individually administered a sociometric interview in April and May of 1972 -- 40 former special class children were interviewed, 606 normal children, and 80 children who had been referred to the resource room for special services.

Procedure: Acceptance and rejection scores were derived for each child by counting the number of times he was named by his classmates, on a sociometric test.

Results: Looking at the distributions of scores, a greater percentage of regular class pupils received high numbers of acceptances and a greater percentage of educable children received high numbers of rejections, but there was considerable overlap between the two groups in both acceptances and rejections. Despite the availability of supportive resource room services, then, the educable children in this study were apparently not any better accepted in the regular classes than were educable children in previous studies who had not received such reportive services. Possible explanations:

1. The rigidity of the age-grade system may work against the EMR child because he is always out of place, either academically or by age. More research is needed on integration in the nongraded elementary school.

2. Both Baldwin and Johnson found that the reasons given for rejection of educable children generally related to antisocial behaviors. There are many educable children who are not rejected; however, more research is needed to determine what distinguishes rejected from non-rejected educable children. Are there practical interventions which will improve the sociometric status of educable children in regular classes?

Comment: This study suffers from the fact that there are no real control groups, simply comparisons with other reports in the literature. Since it deals with the integration of former special-class educables, its implications for an overall policy of integration starting from the beginning of schooling are unclear. The assumption of the "goodness" of peer acceptance is unquestioned. The authors point out directions for further research, but seem unaware of much of the literature on sociometric acceptance and rejection and the interventions relating to it.

109. Jansen, M., et al. Is special education necessary? -- Can this program possibly be reduced? Journal of Learning Disabilities, 1970, 3(9), 434-9, EC030377.

Regular Class Placement/Mentally Handicapped

110. Johnson, G.O. Special education for the mentally handicapped -- a paradox. Exceptional Children, 1962, 29(2), 62-69.

Special Class Placement/Mentally Handicapped/Regular Class Placement/ Teacher Training

A review of a number of studies evaluating how well special education for the mentally handicapped is achieving its objectives indicates a paradox. Even though there are special curricula, smaller classes, specially-trained teachers and more funds spent per capita, mentally handicapped children in special classes seem to be accomplishing the objectives of their education at the same or at a lower level than similarly handicapped children in regular classes. There is general agreement among the studies that regular class children have a higher standard of academic achievement. Insofar as personal, social and economic objectives are concerned, the only consistent finding seems to be that there is greater peer acceptance among special class children than there is of handicapped children in regular classes.

The author hypothesizes that preparation of teachers for the mentally handicapped is to blame for this paradox. Their preparation emphasizes disability rather than ability, and it stresses good mental hygiene for the children - providing situations which will help them grow into emotionally healthy adults. Whereas regular class teachers are trying to bring everyone up to grade level, special class teachers don't expect as much and focus more on adjustment. The solution to the problem is not to reinstitute the pressures on handicapped children as they exist in the regular grades, but to set realistic goals for them, expect success, and then push so that they both strive and achieve.

111. Jones, R.L. Labels and stigmas in special education. Exceptional Children, 1972, 38(7), 553-564.

Labeling/Self-Concept/Teacher Attitudes/Cultural Influences/ Regular Class Placement

Two problems exist in the labeling of educable mentally retarded and culturally disadvantaged students: 1. labeling often generates problems of lowered self-concept and expectations which interfere with the child's optimum performance and development; and 2. no systematic research has been conducted to assess children's attitudes to their labels and their special placement. Various experimental studies related to these problems

are reviewed in order to call attention to the fact that labels and stigma are two important variables that need to be considered in planning services for exceptional children.

112. Jordan, J.B. Invisible college on mainstreaming addresses critical factors in implementing programs. Exceptional Children, 1974, 41(1), 31-35.

Educational Planning/Resource Room/Curriculum

The CEC Information Center convened an "Invisible College" of 12 participants on June 27-28, 1974, in Carmel, California. Its task was to explore critical factors in implementing mainstreaming programs. The participants included government administrators, parents, professors, research specialists and teachers from diverse geographical areas.

The contents of the conference are not reported, but a sample of scattered conclusions is given. Some of these are: the process of educational change needs to be better understood and controlled. Parents have needs which the school system should meet. Mainstreaming involves parents, makes the school more child-centered, and increases individualized instruction for regular pupils. It is difficult, but possible and desirable. The board of education and the school system staff must be committed to the policy. Some procedures useful in mainstreaming are progressive inclusion, the team approach to assessment, planning and review, trade-off between regular and special education teachers, and open-spaced school arrangements. It is still possible that the special education resource room is an instance of tokenism toward exceptional children.

113. Jordan, J.E. and Proctor, D.I. Relationships between knowledge of exceptional children, kind and amount of experience with them, and teacher attitudes toward their classroom integration. The Journal of Special Education, 1969, 3(4), 433-41.

Teacher Attitudes/Regular Class Placement

Purpose: 1. To investigate the attitudes of specific teacher groups toward the educational placement of exceptional children, and 2. To study the relationship of these attitudes to knowledge of disabilities and to type and amount of teaching experience.

Subjects: 154 randomly-selected teaching personnel from 20 elementary schools in the Jackson, Michigan, Union School District.

Procedure: The Classroom Integration Inventory (CII), which measures "realistic acceptance," and the General Information Inventory (GII), which measures factual information about exceptional children, were the instruments used.

Results: The special education teachers were significantly better informed (higher GII scores) than the regular classroom teachers, but they did not have more "realistic" attitudes toward classroom integration (i.e., higher CII scores).

Comment: Although significant, the differences in mean scores are all almost uniformly small.

114. Karnes, M.B., Zehrbach, R.R. and Teska, J.A. A five-year longitudinal comparison of a traditional versus structured preschool program on cognitive, social and affective variables. Paper presented at the 1972 AERA Convention, Chicago, April 1972.

Social Adjustment/Student Attitudes/Curriculum/Diagnostic-Prescriptive Teaching

Purpose: To compare the cognitive, social and affective effects on low-income preschool children of a traditional program with those of the Karnes curriculum, a highly-structured program based on a game format and stressing motor-sensory manipulation.

Subjects: Sixty four-year-old children from low-income families were enrolled in a preschool intervention program and assigned to one of four classes (15 each), which were stratified on the basis of sex, race, IQ and age. Two classes were taught by the Karnes curriculum and two by the traditional curriculum.

Procedures: During the first year, each of the 60 students was given the same degree of teacher-pupil ratio (1:5), physical facilities, equally trained teachers, length of school day (2-1/4 hours), psychological examiners, medical examinations, nutrition and evaluation procedures. The only difference in the first year of schooling was that 30 students received the Karnes curriculum and 30 received the traditional curriculum. In the second year, the Karnes children had a one-hour per day supportive program, together with regular public school kindergarten, while the traditional children attended kindergarten only. Subsequently, all children attended public schools with no further intervention. All children were given two measurements: the Stanford-Binet was administered at the time of intervention and yearly thereafter through grade three; the California Achievement Test was administered at the time of intervention and at the end of the second, third and fourth years. Results of the tests are analyzed and presented in tables. A follow-up questionnaire was administered to each child's public school teacher at the end of kindergarten, and the results are tabulated and presented in a table. At mid-fourth grade level, the students were administered a "crossing out T's" test under conditions of high and low incentive and were also given an elementary sentence completion test that assessed attitudes toward self, others and school. These results are analyzed and presented in tables.

Results: The results of the Stanford-Binet test indicate that the Karnes program initially was more effective in promoting cognitive development than was the traditional program. After three years, however, the differential

program effects of the two were no longer statistically evident. Results of the California Achievement Test indicate that at the end of the first grade, the Karnes group was nearly one-half year ahead of the traditional group in reading levels. At the completion of the second grade, the difference between the two groups was .29 year. The magnitude of the difference had increased again, to .22 year, by the end of the third year, but it still remained statistically significant. The teacher questionnaire, broken down into questions concerning social development and work habits, also revealed some significant differences. On items relating to social development, the two groups did not differ on six of the eight items. On items relating to the child's confidence in approaching new tasks and the child's concept of self, the teachers rated the Karnes children significantly higher than the traditional children. Substantial and significant differences in favor of the children who attended the Karnes program are also found of all six of the work habit items in the questionnaire. In the "crossing out T's" test, the results revealed that the children from both programs worked significantly harder for reinforcement under the high-incentive condition than the low-incentive condition and that there were no significant differences between the groups in the way they responded to either the low or high incentive conditions. In the sentence completion test, the results show that the Karnes children have expectedly fewer conflicts in their general attitude than do the traditional children. Also, the children in the highly-structured, cognitively-based Karnes curriculum were no more conflicted in their attitudes toward school than were children in the traditional program. Analysis of the completion test also revealed that there is no probable difference in the amount of positive social acceptance felt by either group. Overall, the data support the contention that the Karnes Preschool Program significantly enhances the functioning of children in the cognitive, social and affective areas.

Comments: Research seemed to be well-designed and carried out so that the results seem very valid ones.

115. Karnes, M.B. Implications of research with disadvantaged children for early intervention with the handicapped. In: J.B. Jordan and R.F. Dailey (eds.), Not all little wagons are red: the exceptional child's early years. Reston, Va.: Council for Exceptional Children, 1973, 46-65.

Teaching Strategies/Curriculum/Regular Class Placement/Early Childhood Education

After a very brief review of the rationale for early intervention, five basic questions about preschool education for the handicapped are answered: 1. Why is an early education program important for handicapped children? 2. Can paraprofessionals be employed to work effectively with the handicapped child? 3. What are the best delivery systems and

curricula for the handicapped child? 4. What kind of intervention programs are most effective? 5. What is the strategic age for intervention and how long should it last? The rationale and financial justification for preschool education for handicapped children are that it can be a preventive program for many children who are prone to need expensive special educational services, and it can help many children function at a higher level than expected upon school entry. The Milwaukee Project and a personal experience are cited as proof of the beneficial effects of preschool programs. If preschools are to be truly effective, the maximum teacher-child ratio should be one to five. Since the cost of staffing so many professional teachers would be prohibitive, it is suggested that an alternative method be used. One possibility is using mothers or teenagers to work, under professional supervision, with the children. The author's experience in such staffing patterns revealed that the progress of children taught a structured curriculum by the non-professionals was comparable to that of the children taught the same curriculum by professionals. Caution should be taken, however, to employ paraprofessionals who relate well with children, who accept supervision easily, and who can follow a structured program of instruction. In seeking to find an effective program for preschool handicapped children, the author conducted a study with disadvantaged children who were initially four years old. Children, controlled for race, age and intelligence, were placed in one of five model preschools, ranging from the traditional to the very highly-structured. A description of each program is given. Participants of the GOAL and the Bereiter-Engelmann models, the two highly-structured, segregated programs which entailed a high degree of adult-child verbal interaction, made the largest average IQ gains (14 points), over a seven to eight month period, and none failed to make some gain. In the traditional, segregated model, a very informal program with much free play and emphasis on music, art and story-telling, participants gained an average of eight IQ points. In the Montessori segregated model, children gained an average of five points, as they also did in the Community-Integrated model, which was much like the traditional in its approach, but which was integrated with middle and upper-class normal children. Fifteen to 24 percent of the children enrolled in the three less structured programs regressed in IQ scores. Results on three ITPA subtests are presented, as well as a follow-up test on three groups of the original children. The conclusion of all testing results indicates that a deliberate effort must be made to teach a child; therefore, a highly-structured preschool program is recommended for the disadvantaged child. Children with specific learning problems or handicaps should profit from the same structure. Although no one program has all the answers, schools which are most successful contain three basic elements: 1. a carefully-defined approach with a strong theoretical orientation; 2. a curriculum that attends to the individual child's needs and fosters development in language, motivation to learn, self-concept, social, perceptual and motor skills, and information processing; and 3. a mode of operation that has a low child-adult ratio and strong supervision, emphasis on curriculum development and planning, and continuous inservice training. Also, reinforcement at home is very important, so parents should be included in the child's educational planning.

Usually education provides such a program in the teacher-directed classroom, but alternative delivery systems should be considered. The possibility of a school-home or a total home intervention program is discussed. No matter how intervention takes place, the earlier it takes place, the better, especially for the handicapped child, for then the remediation can begin earlier and last longer. The child who has a special learning problem should continue to receive special intervention until he demonstrates that he can function adequately in the mainstream of public school without special services. In discussing each of the six questions, the author has extensively used personal experiences and the research of others in the field of special education to support the answers that are logically presented.

116. Kauppi, D.R. The emperor has no clothes: comments on Christoplos and Renz. The Journal of Special Education, 1969, 3(4), 393-7.

Regular Class Placement/Curriculum/Legislation

117. Kennedy, P. and Bruininks, R. Social status of hearing impaired children in the regular classrooms. Exceptional Children, 1974, 40(5), 336-45.

Hearing Handicapped/Self-Concept/Social Adjustment/Regular Class Placement/Peer Relationship

Purpose: To assess peer status and self-perceived status of first and second graders who have normal hearing and who have hearing impairments.

Subjects: Fifteen hearing-impaired children (seven boys and eight girls; 12 first graders and 3 second graders) were enrolled in 13 separate elementary classrooms with 277 normally-hearing classmates. All of the 15 children had lost their hearing before the age of 15 months, had been provided special preschool services in language and auditory training, had been enrolled with hearing children in neighborhood nursery schools, and were presently wearing a hearing aid and receiving daily tutoring outside the regular classroom. All of the 15 ranged from moderate to profound in hearing loss, but all scored within the average range in mental testing.

Procedure: Three different sociometric tests were administered to all hearing-impaired and normally-hearing children in the same classrooms: 1) a modified Moreno test in which students were asked to designate the three classmates they would choose to play with; 2) a modified Ohio Social Acceptance Scale in which every group member would rate every other group member in terms of the degree to which he wanted him for a friend; and 3) a reversal of the Acceptance Scale in which each class member assessed self-perception of their own peer status. Much care was taken in making

certain that each child understood the testing procedure in order that results would be valid. All completed tests were then analyzed by comparing the total hearing sample to the total group of hearing-impaired subjects, as well as to the two groups of hearing-impaired children divided according to the degree of hearing loss. Results are tabulated in tables.

Results: Children with severe to profound hearing losses were nominated as friends more often than normally-hearing subjects, with no significant difference in peer nominations between the total hearing-impaired population and their hearing peers, nor between the mild to moderate group and normally-hearing subjects. Children with mild to moderate losses, however, were less accepted than those with severe to profound losses. In the analysis of mutual choices, children with severe to profound hearing losses also achieved significantly more mutual choices than hearing subjects, and the hearing-impaired group as a whole had significantly more mutual choices than the normally-hearing subjects. The forced choice peer acceptance scale revealed that the severe-to-profound hearing loss group and the total hearing-impaired groups scored above their normally-hearing classmates, with no significant difference between the sociometric scores of the two groups. Children with severe to profound hearing losses were significantly higher in rated popularity than normally-hearing pupils. In the socioempathy scores for the three groups, there were no significant differences. Moreover, there was no appreciable difference between attained and self-perceived peer status within either the total hearing-impaired and normally-hearing groups.

Comments: Even though the sample size of 15 was rather small, great care was given to the administration and evaluation of the three tests. The authors also recognize the limitations of the study by acknowledging that outside forces, such as optimal classroom setting and sociable personalities, may greatly influence such a study. A two-year follow-up study is presently being conducted to assess the stability of peer ratings for this sample, as well as to determine more precisely the correlates of their social acceptance.

118. Kirk, S.A. Classification and placement of the mentally retarded. In: Proceedings Conference on the Education of Mentally Retarded Persons. Washington: National Association for Retarded Children, 1971, 95-102.

Labeling/Mentally Handicapped/Regular Class Placement/Individualized Instruction

119. Kirk, S.A. Early education of the mentally retarded. In: J.F. Rosenblith and W. Allinsmith (eds.), The causes of behavior: readings in child development and educational psychology. Boston: Allyn & Bacon, Inc., 1962.

120. Kirk, S.A. The educability of intelligence: start with young children. In: J.B. Jordan and R.F. Dailey (eds.), Not all little wagons are red: the exceptional child's early years. Reston, Va.: Council for Exceptional Children, 1973, 10-21.

Labeling/Assessment Techniques

Too frequently, educators discard information obtained from observation for statistical analyses of the results of various experimental and control research studies. This is an unfortunate situation, for many useful insights can be gathered from the study of clinical cases. The author describes several personal experiences with handicapped children to support his belief that the environment has profound effects on young children. Even though inheritance may fix the limits of intelligence, there is a large range within which the environment can raise or lower the capacity to learn. Clinical cases have given evidence that the bigger the change in environment, the greater the change in the child. Unfortunately, education does not offer a total change in environment or training. To counteract a child's unhealthy environment and the resulting disabilities, two things need to be accomplished: a useful diagnostic examination to measure intra-individual differences, rather than inter-individual differences (the IQ test), needs to be developed for the preschool child, and widespread preschool programs that offer individualized programs for all children need to be established. Because of the high cost of administration, transportation and facilities in a centralized preschool education, home schools for the neighborhood are suggested. Parents could be trained to aid a single teacher who comes in to serve four or so families. A final warning is given about a preschool program being too highly structured, which can too early put an end to exploration and creativity in the child.

121. Kolstoe, O.P. Programs for the mildly retarded: a reply to the critics. Exceptional Children, 1972, 39(1), 51-6, EC042786.

Mentally Handicapped/Early Identification/Special Class Placement

The author refutes six allegations concerning both methods of identifying the retarded and the effectiveness of programs for educating them. Evidence is cited to show that the mildly retarded do not significantly improve in intelligence level when they reach adulthood. Labeling of children is then explained not to cause harm to the child, but to enable society to help the child who is singled out. The generally-accepted premise that special class placement is bad for the child's self-concept is said to be based on a study using the Illinois Index of Self Derogation, which is then shown to have a test-retest reliability of 80 percent. The alleged fruitlessness of special education programs is countered with the argument that special programs do more than teach basic academic skills, since they teach skills of employability and self-management. Data supporting the allegation that teachers contribute to the self-fulfilling prophesy of low academic

achievement are said to be weak. General education is then explained not to be better able to provide for a wide range of individual differences than it has been. It is thought that criticisms aimed at special classes are actually criticisms of some of the administrative aspects of the program. (Author/CB - Abs. from Council for Exceptional Children.)

122. Lawrence, E.A. and Winschel, J.F. Self-concept and the retarded: research and issues. Exceptional Children, 1973, 39(4), 310-19.

Self-Concept/Mentally Handicapped/Regular Class Placement/Assessment Techniques

Scales. There are numerous self-concept scales in this research area. The validity, standardization and interpretation of these instructions can be questioned. Self-report measurement with the retarded is very difficult.

Self-concept of the retarded vs. the nonretarded. The assumption has been that, because of failure and frustration, the retarded have a more negative self-concept. The weight of research evidence tentatively suggests that there are differences in various dimensions of self-concept between normal and educable mentally retarded children, but the common assumption is not overwhelmingly brought out.

Educational placement and self-concept. The studies on placement indicate that, with the possible exception of an increased feeling of academic adequacy, segregation does not appear to contribute to positiveness of self-concept among the retarded. The findings are tentative, however, and warrant guarded conclusions only.

Treatment and self-concept. The results of psychotherapy, counseling and other treatments are sufficiently encouraging to justify further research.

Academic achievement and self-concept. To what extent a more positive self-concept contributes to higher achievement or higher achievement to a more positive self-concept has not been established.

Other variables. The relationships between self-concept in the retarded and such variables as IQ, sex, age, race, ideal self and vocational adjustment are still unclear after research and need more conceptual and experimental work.

The authors further recommend longitudinal studies of the development of self-concept, more work with subscales which provide measurement of the individual components of self-concept, and alteration to such neglected variables as personality of teachers and curricular content.

Comment: The whole idea of self-concept seems very nebulous, which may account for the extremely tentative results so far obtained. Research has been haphazard - conceptualized and attacked in different ways by different researchers. Because of the policy implications for the mentally retarded, a more intercoordinated approach to this area might be advisable.

123. Leckie, D.J. Creating a receptive climate in the mainstream program. Volta Review, 1973, 75(1), 23-7, EC050828.

Hearing Handicapped/Regular Class Placement/Teacher Attitudes

To facilitate integration of hearing-impaired children into regular public school programs it is recommended that administrators in the special schools initiate a selling effort to convince mainstream educators of the importance of accepting hearing-impaired students and of providing adequate programing for them. Discussed are current acceptance of individualized education, the essential role of an integration officer from the special school, well-rounded deaf children who have adequate skills for public school integration, publicity, and reduction of costs as a secondary benefit of integration. (Author/DB - Abs. from Council for Exceptional Children.)

124. Lesiak, W.J. and Wait, J.A. The diagnostic kindergarten: initial step in the identification and programing of children with learning problems. Psychology in the Schools, 1974, 11(3), 282-290.

Early Childhood Education/Individualized Instruction/Diagnostic Prescriptive Teaching

"Description of a model of how a traditional kindergarten program was modified into a diagnostically-oriented, developmentally-planned experience that focused on early assessment of children and provision of educational experiences based on individual levels of readiness."

This article includes information on implementation and operation, assessment strategies, intervention programs. The kindergarten project was seen as only a first step in a four-year program of intervention for children with limited previous experiences and/or developmental lags. The school psychologist serves as a teacher and program consultant to develop intervention programs, as well as being available to help individual children with their problems.

125. Lilly, M.S. Forum: a training-based model for special education. Exceptional Children, 1971, 37(10), 745-9, EJ040847, EC032707.

Regular Class Placement/Special Class Placement/Educational Planning

Special class services for the mildly handicapped have been shown to have liabilities sufficient to warrant a search for alternative service structures. Such structures should meet the following criteria: 1. Once a child is enrolled, it should be impossible to administratively separate him from the regular education program. 2. Responsibility for handling difficult classroom situations should lie with the regular teachers. 3. The goal of special education should be to enhance the regular teachers' skills to the point that such situations can be handled. The author suggests a gradual changeover to a structure in which the entire special education budget is devoted to instructional specialists who would train teachers in the classroom to handle difficult children on whom the teachers have made referrals. All special education personnel would be reassigned, either as regular teachers or instructional specialists. As well as having the interpersonal skills necessary for successful teacher training, the instructional specialist should have skills in the diagnosis of problems in academic areas, specification of individual and small group study programs, behavior management procedures, and group and individual reinforcement patterns. Because special education is not accomplishing its objectives, and because this new structure is logical and functional, it would not be impossible to convince administrators to change, nor to get enabling legislation enacted.

Comment: This proposal is unrealistic in several ways. It places too much of a burden on regular teachers. It assumes that they are trainable to handle any situation. It assumes there is a body of techniques to train them in. And it underestimates the entrenched nature of current special education service personnel.

126. Lilly, M.S. Special education: a teapot in a tempest. Exceptional Children, 1970, 37(1), 43-49.

Regular Class Placement/Special Class Placement/Legislation/Teacher Attitudes/Labeling/Administration Attitudes/Individualized Instruction

Although efficacy studies are inconclusive about the value of special education classes, the weight of evidence suggests that special programs have produced little that is superior to what is produced in regular classes. Because of this situation, the author advocates an immediate end to self-contained special classes for all but the severely handicapped, and he quotes from eight known policy makers and practitioners in the field of special education who support his opinion. He states that the special education structure has not been responsive to the cries for change. One of the main reasons for the continuation of the status quo is rooted in the fact that the Council for Exceptional Children, the largest professional organization of special educators, frequently fails to acknowledge the need for change. The Council for Exceptional Children, as a Congressional lobbyist for special education, has encouraged

legislation that hardens the categorical labeling of handicapped children and supports services of dubious value. The Bureau of Education for the Handicapped also supports the traditional structure of special education for two reasons: 1. The operant system is a stable one in which accounting procedures for teachers, students and researchers are straightforward, and any change would bring problems into the system; and 2. A change in this system would create problems of funding. The author argues, however, that neither of these organizations has the educational interests of the special child as its main concern. Another reason for perpetuation of the status quo is the lack of models from which to work in implementing the integration process. The author refutes this argument by citing six existing models. The final reason for the lack of change in special programs rests in the fact that educators look at special children in terms of deficits. The author suggests that education needs to acknowledge deficits in the school structure, rather than in the child, and then change its definition accordingly. The classroom situation needs to be analyzed and changed and a new system allowed to emerge in which the child is not removed from a problem situation. Instead, the child would remain in the regular program and the teacher would strive to structure an individualized program of learning. Finally, the author emphasizes that the needed changes in the structure of special education must be made as quickly and as completely as possible, with broad experimentation in a variety of acceptable approaches to the delivery of special services.

127. Macmillan, D.L. Special education for the mildly retarded: servant or savant. In: R.L. Jones (ed.), Problems and issues in the education of exceptional children. Boston: Houghton Mifflin, 1971, 400-17.

Mentally Handicapped/Teacher Training/Special Class Placement/ Regular Class Placement/Cultural Influences/Labeling/Screening - Early Identification

The author examines the complexity of issues surrounding the question of special class placement and makes recommendations for ameliorating the problem. Throughout the article, a review of studies about special education is presented with arguments about their weaknesses in sampling sizes and procedures, teacher variables and measurement instruments. Particular emphasis is given to Lloyd M. Dunn's 1968 article that triggered the debate over mainstreaming. A full discussion of the four major problems confronting special education is presented: 1. the lack of adequate teachers trained to cope with special children in either the regular or special class; 2. the improper identification of the particular problem of a special child and the structuring of a program that meets his needs, whether in a regular class, a resource program, or a self-contained special class; 3. the problems of the special child when he is placed in a segregated class and labeled mentally retarded, or when he is left in the regular classroom and made to feel inferior by his peers and teachers;

and 4. the inflexibility of most curricula , based on cognitive learning, to deal with the motivation (expectancy of failure, negative reaction tendencies, outerdirectedness) which plagues most EMR children. Because of the multi-dimensions of each of these problems, it is emphasized that the battle over regular class placement vs. self-contained classrooms will not solve the problems of special education. Instead, research must be performed to determine to what extent and under what circumstances can a wider range of individual differences be accommodated in the regular class than is presently the case. It is obvious that at the present time, with inadequate research and teacher training, large-scale transfer of the EMR student to the regular classroom is inadvisable and would harm more than benefit the special child. For the time being, it seems desirable to perform three tasks: 1. focus on prediction and prevention of learning problems, rather than on remediation; 2. create transitional programs to prepare the special student in basic skills to move from the self-contained to the regular class; and 3. create competence-based teaching models designed to deal with individual differences in the classroom and train teachers to follow these models. Even if new models are created and implemented to accommodate greatly-differing levels of learning in the regular classroom, some EMR students, including some borderline cases of minority status, will not be properly served and would benefit from continued special placement.

128. MacMillan, D.L., Jones, R.L. and Aloia, G.F. The mentally retarded label: a theoretical analysis and review of research. American Journal of Mental Deficiency, 1974, 79(3), 241-261.

Mentally Handicapped/Labeling/Academic Adjustment/Peer Relationship

Research on the detrimental effects of labeling a child "mentally retarded" are anything but conclusive when one looks at the reported evidence. Most studies don't isolate the labeling variable but confound it with a host of other variables (label/segregation/curriculum/teacher-pupil ratio, etc.). Further, the labeling process itself is too uncontrolled for unbiased research. One cannot equate two children of equal IQ, one in a special and one in a regular class, because IQ is not the sole criterion of mental retardation - behavioral maladaptiveness and teacher tolerances for deviance may also enter in. Given these drawbacks, studies of the efficacy of special class placement have little to say about the deleterious effects of labeling. Measures of outcome of labeling have two major difficulties. Different instruments are used from study to study, making comparison a hard task, and these same instruments were often invented for the intellectual normal, making their applicability to the mentally retarded a debatable question.

No evidence has been found of a direct relation between self-concept and labeling. Peer rejection may be due to maladaptive behavior, rather than to the label. Reviewing the relevant studies, there is paucity of evidence

to support the theory of the self-fulfilling prophecy: that knowledge of a label determines one's responses toward and the reaction of the one labeled, in general, and with the mentally retarded in particular. Labeling is confounded with other variables in studying post-school adjustment, but since some researchers have suggested doing away with the mental retardation label in school because it has little to do with adult status, it is hard to argue that the label has a lifelong detrimental effect on occupation/vocation. The reports of parents of EMR students and the students themselves clearly indicate that they deplore being labeled mentally retarded and being placed in special classes.

The second half of the article, called "Complexity of the Labeling Phenomena," explores variables that are hypothesized to interact with the label to determine its effects.

129. Martin, E.W. A new outlook for education of handicapped children. American Education, 1970, 6(3), 7-10.

Labeling/Community Attitudes/Special Class Placement/Parents' Role/ Individualized Instruction/Regular Class Placement/Early Childhood Education

Since 60 percent of America's handicapped children are not receiving appropriate special education services, public and private agencies at all levels must provide an early educational program which can prevent or reduce the severity of handicapping conditions and result in economies and educational gains. In addition, early intervention can change the attitude and reaction of people with whom the child comes in contact and, therefore, reduce some of the factors compounding his problems. The new emphasis on early education has also made the labeling process a questionable one, for it seems to create a self-fulfilling prophecy: the child, labeled and treated as handicapped, becomes more handicapped. Once a label has been applied, it is very difficult to shed, and the child becomes stuck in special education classes. Another major contribution of early education is the realignment and bringing together of the roles of educators and clinicians, a combination which has created a new emphasis on individualized teaching, where constant diagnosis and evaluation is occurring. Early education also recognizes the important role of parents and encourages them to actively participate at all levels in the child's education. Finally, in order to provide early education for all handicapped children, great changes must be made in the entire educational system, and they should be changes that renew and revitalize a stale system.

130. Martin, E.W. Individualism and behaviorism: future trends in educating handicapped children. Exceptional Children, 1972, 38(7), 517-525.

Individualized Instruction/Behavioral Objectives/Legislation/ Teaching Strategies

131. Martin, E.W. Some thoughts on mainstreaming. Exceptional Children, 1974, 41(3), 150-153.

Regular Class Placement/Staff Relationships/Teacher Training/ Social Adjustment

132. Masland, R.L. Medical aspects. In: State of the art: where are we in learning disabilities? ACLD and CANHC Publications, 1974, 9-22.

Learning Disabilities/Screening - Early Identification

A brief review of important articles dealing with the neurological aspects of learning disabilities is presented, along with comments on the present state of the art. The author feels that the importance of all of these studies rests in the fact that susceptibility to learning disabilities can be recognized early in the pre-kindergarten years and that proper remediation can prevent school failure. He also believes that it is the responsibility of the family doctor to learn about screening procedures to test the probability of a child's having learning problems. If the doctor, parents and educators all work together for the child, he can be identified as LD early enough to receive effective remediation.

133. McAfee, O. An integrated approach to early childhood education. In: J.C. Stanley (ed.), Preschool Programs for the disadvantaged. Baltimore: Johns Hopkins University Press, 1972, 67-91.

Early Childhood Education/Program Evaluation

A discussion of a study conducted at The New Nursery School in Greeley, Colorado, for "intellectually disadvantaged children," which was an experiment in "developing an environment responsive to the child's interests and needs, but seeing the obligation to help the children learn" (p. 67). The article attempts to show that "both content and process objectives suitable for early education can be achieved without drill, pressure or a rigid curriculum" (p. 69).

Comment: The article includes an elegant chart of Systems Approach to New Nursery School Project -- but both Objectives and the Methods & Procedures are stated in such general terms as to be almost meaningless. It is difficult to see the connection between the procedures and the data collection tools. Process orientation is also measured with product-tests.

134. McCarthy, J.M. The field of education. In: State of the art: where are we in learning disabilities? ACLD and CANHC Publications, 1974, 23-27.

Learning Disabilities/Supportive Services/ Resource Room/Teacher Training/Regular Class Placement/Economics

The most important aspect in the education of learning disabled children is to provide a continuum of services in the schools so that the intensity of the service can be matched to the severity of an individual learning disability. To ensure that the right children are placed in the right program, eligibility criteria for special programs must be established and rigidly followed. Unfortunately, a large proportion of LD children are being misplaced, for special classes are losing favor. In order to reduce costs of special education, administrators are accepting mainstreaming and, as a result, intensive services are being reduced or abandoned and the severely disabled student is being neglected. If all handicapped children are to be reached, one of two alternatives must happen: more monies must be appropriated to cover the increase in the number of handicapped students in the regular public classroom, or special education must serve the moderately and severely handicapped, while services to the mildly handicapped are provided out of the regular education budget. No matter how it is financed, education can do four things to aid the plight of the learning disabled student: 1. define the population to be served by special education; 2. provide support and skills to regular education so that those teachers can share the responsibility of teaching the LD; 3. validate the instructional approaches used for the LD child; and 4. encourage research and theoretical formulation in the area of learning disabilities. Fortunately, progress is being made in these areas and proper education has begun in some parts of the U.S. where experimental programs are being implemented and studied.

135. McCreary-Juhasz, A. and Jensen, S.E. Clearinghouse: benefits of a school camp experience to emotionally disturbed children in regular classrooms. Exceptional Children, 1968, 34(5), 353-4.

Emotionally Disturbed/Regular Class Placement/Peer Relationships/ Social Adjustment

136. McKee, G. Vision screening of preschool and school age children: the need for reevaluation. Journal of the American Optometric Association, 1972, 43(10), 1062-1073, EC042904.

Visually Handicapped/Learning Disabilities/Screening - Early Identification

Briefly reviewed were learning disabilities screening programs for preschool and school-age children which tap multisensory and motor skills and utilize an interdisciplinary team approach. Provided were guidelines for optometrists who serve as school consultants as well as educators in the selection of an appropriate means of early identification of children with learning disabilities. General topics first covered included limitations of screening, history of screening and school programs. Topics then reported on in the research review pertained to areas such as the relationship

of vision to learning, vision and hearing screening of mentally retarded children, high referral rate, the classical screening picture, multiple visual skill areas in preschool screening, relationship of perceptual skills to achievement, processes by which children succeed academically, factors commonly seen in children with learning disabilities, neurological defects, heredity, early diagnosis of learning problems, motor areas of performance, role of environment and guidance of infants' experiences, visual perception and remedial education. (CB - Abs. from Council for Exceptional Children.)

137. Melcher, J.W. Handicapped children in regular school setting: four suggested models using BEPD funding. In: M.C. Reynolds and M. Davis (eds.), Exceptional children in regular classrooms. Minneapolis: Leadership Training Institute, 1971, 84-87.

Emotionally Disturbed/Modeling/Physically Handicapped/Mentally Handicapped/Hearing Handicapped/Administration Attitudes

Specific circumstances that force reassessment of separation of handicapped from regular students and classrooms: fiscal resources, negative criticism of both general and special education, greater use of paraprofessional and volunteer help in schools, change in the type of college training and increased interest in early identification of multi-faceted needs of children with "soft sign" disabilities.

The article proposes four models: Model 1: to include two or three moderately emotionally disturbed children in the regular classroom; Model 2: to include the hard-of-hearing in the regular classroom; Model 3: to include two or three physically or mentally handicapped in the regular classroom; and Model 4: the improvement of relationships with auxiliary school personnel. The article also includes suggestions for special personnel, proposed training and related administrative adaptations.

138. Mercer, J.R. Sociocultural factors in labeling mental retardates. Peabody Journal of Education, 1971, 48(3), 188-203.

Labeling/Community Attitudes/Cultural Influences

Field surveys and educational studies have repeatedly shown that a disproportionately large number of persons from low socioeconomic status and from ethnic minority backgrounds are labeled as mentally retarded. A review is given of both the clinical and social hypotheses frequently used to account for this discrepancy. Then the author presents a third hypothesis to account for the difference. Using data files of the Riverside, California epidemiology of mental information that identifies retardates located by both the public schools and community organizations, the author tested the hypothesis that persons from lower socioeconomic levels and/or ethnic minorities are more vulnerable to the clinical

labeling process. Tables are presented to reveal the characteristics of mental retardates labeled by the school and by the community. Analysis of the findings show a very similar pattern. Persons from low socioeconomic levels and ethnic minority groups were more vulnerable to the labeling process. Those who were labeled from ethnic minority groups had significantly fewer physical disabilities than their Anglo counterparts and they had fewer adaptive behavior failures. Persons from minority groups assigned the status of mental retardate were not only less deviant physically and behaviorally than Anglo-labeled retardates, but the analysis of the labeling process in the public school indicated that children from minority groups were more likely than Anglo children to be placed in the status of mental retardate once they failed an IQ test. An identical pattern was for children from low socioeconomic levels. These results support the fact that clinical measures, such as the standard intelligence test, are correlated with sociocultural characteristics so that persons from non-modal backgrounds are systematically handicapped and often unfairly labeled as mentally retarded. The author points out the need for an evaluation system with pluralistic norms in order that an individual's performance can be validly estimated.

139. Meyerowitz, J.H. Parental awareness of retardation. American Journal of Mental Deficiency, 1967, 71(4), 637-43, EC011894.

Mentally Handicapped/Parent Attitudes/Regular Class Placement/ Special Class Placement/Early Identification

One hundred twenty educable mentally handicapped children (IQ's of 60 to 35) were randomly placed in either regular first grade or special education classrooms. Sixty normal first graders (IQ's of 90 to 110), matched by family socioeconomic status, served as controls. Questions asked of parents at three points during the child's first two school years focused upon awareness of mental deficiency and its implications for the child's future. Parents of retarded children indicated that their children had responded in an immature manner to their environment and were expected to complete fewer years of schooling; however, they held life goals and occupational expectations for their children which did not differ from those held by parents of normal children. Parents of retarded children in special classes manifested greater awareness of their children's deficiency than did parents of retarded children in regular classes. At the end of the first and second years, when parents compared their children with others along six academic dimensions, the control parents responded differently from parents of retarded children, but the two groups of parents of the retarded did not differ significantly. At the end of the first year, when parents compared their children in social areas, no significant differences were found. Thus, parents of the retarded accepted middle-class occupational respectability, but rejected the schools as a means to this end and they also rejected evaluations of their children made by the school. (TL - Abs. from Council for Exceptional Children.)

140. Meyerowitz, J.H. Self-derogations in young retardates and special class placement. Child Development, 1962, 33, 443-451.

Assessment Techniques/Self-Concept/Mentally Handicapped/Special Class Placement/Labeling/Academic Adjustment

Purpose: To study the effects of placement in a special class on the educable mentally handicapped (EMR) child's perception of himself.

Subjects: 120 entering-first-grade children in three Illinois counties were identified as EMR (IQ's of 60 to 85) by standard tests. Through randomization, 60 were assigned to special classes and 60 were left in the regular first grade. A third matched set of 60 formed a "criterion" group of normal first graders.

Procedures: At the end of the first grade year, all subjects completed the Illinois Index of Self-Derogation, an instrument developed for this study and rigorously pre-tested.

Results: The normal children had a mean of 2.6 derogations; the total EMR children, 3.2 derogations. EMR children in regular classes had a mean of 3.0 derogations, special class EMR children, 3.4 derogations. These differences were statistically significant. The author concludes that:

1. The insensitivity to status usually attributed to primary-age EMR children does not appear to be warranted.

2. Special class children in this study developed a more negative self-concept than they would have if they had been left in regular classes. The author offers three possible explanations for this second finding, which contradicts informed expectation.

Comment: This is a well-controlled, tight study. The differences between groups were statistically significant, but they were not large. The question remains as to whether they are meaningful. The special class program was not described. The generalization to all special classes may be unwarranted.

141. Miller, J.G. and Schoenfelder, D.S. A rational look at special class placement. The Journal of Special Education, 1969, 3(4), 397-405.

Special Class Placement/Regular Class Placement

The authors present their arguments against the abolishment of special classes, and review the weaknesses of earlier articles which favored such a policy. The job of the school is to develop the special talents of each child and prepare him to adapt socially, emotionally and physically to society. The exceptional child is one who needs special management

not possible in the regular classroom to obtain these goals, and special education programs were initiated in response to these children. If a special problem is remediated in the special classroom, the authors believe the child is returned to the mainstream, and examples of such movement are cited as support. Unfortunately, the problems of many EMR students will never be remediated, for there is empirical evidence which mitigates against the possibility of raising intellectual capacity. Integration of such children into the regular classroom would only cause frustration on their parts and give the teacher less time to help each child individually. The authors argue, however, that children who remain in the self-contained class should be given special educational goals. For the most part, they feel that such is being accomplished, and most special education classes are appropriately taught. The controversy over special classes has developed because the ways of measuring the success of special education are irrelevant; classes are judged on academic achievement, rather than on the development of self-sufficiency, self-respect, reliability and job training. Before either segration or integration of the exceptional child is accepted as the solution to the problems of special education, much more research needs to be performed to investigate the effects of each method.

142. Moore, S.G. Correlates of peer acceptance in nursery school children. In: W.W. Hartup and N.L. Smothergill (eds.), The young child: reviews of research. Washington, D.C.: National Association for the Education of Young Children, 1967, 229-247.

Peer Acceptance/Early Childhood Education

This article first reviews methods and problems in studying the sociometric status of children in nursery school groups, and then covers research on the relation between sociometric status and four aspects of the young child's peer group behavior. 1. Social participation and friendliness: significant, but low positive correlations are usually found between high sociometric status and various measures of "friendly behavior." It is not known whether friendly behavior causes popularity or popularity, friendly behavior. 2. Aggression: two studies found no relation and four found a positive relation between sociometric rejection and aggressive behavior. There are several suggestive findings on the influence of different types of aggression on sociometric status. 3. Compliance with routines: three studies found a positive relation between high sociometric status and cooperativeness in carrying out routines. The author believes this is tapping a maturity factor, rather than a compliance factor. 4. Adult and peer dependence: there is a negative relation between affection-seeking from adults and sociometric status, while there appears to be a low positive relation between peer-dependency and sociometric status. The author suggests implications of these findings for teachers and parents.

143. Mullins, J.B. Integrated classrooms. Journal of Rehabilitation, 1971, 37(2), 14-16, EC031836.

Physically Handicapped/Regular Class Placement

The article identifies some critical problems in the area of education of physically-handicapped children and suggests some remedies. Examples are cited which illustrate problems caused by unnecessary segregation of the physically-handicapped in special classes and schools. Difficulties caused by the wide range of age, intelligence and types of behaviors and disabilities in such classes are pointed out. The paper argues that the kinds of problems discussed would diminish if physically-handicapped children were placed in regular classes according to their developmental and educational needs, rather than in special classes on the basis of medical diagnosis. How to meet their physical and medical needs in a regular classroom is briefly discussed. (KW - Abs. from Council for Exceptional Children.)

144. Nelson, C.C. and Schmidt, L.J. The question of the efficacy of special classes. Exceptional Children, 1971, 37, 381-384.

Educational Planning/Regular Class Placement/Special Class Placement

The philosophical issues of the controversy over the efficacy of segregated classes for handicapped children is discussed. The main reasons for the debate on whether to abandon special classes rests in the fact that many special educators have difficulty in three philosophical areas: 1. They adhere to the status quo, for they are afraid that a new model can never be as effective a guide as past experience; 2. They fail to advance beyond an intuitive problem-solving approach or define problems in order to generate empirically verifiable statements; and 3. They fail to examine critically the constitutive and operational validity of the constructs of special class teaching. In addition, efficacy studies of special programs have failed to answer basic prior questions related to the constructs. The authors, therefore, evolve 11 basic questions that need to be answered before the controversy over special classes can be solved among researchers and practitioners. Although the authors do not argue for an exclusively logical treatment of the problems of special education, they maintain that there must be systematic examination of the constructs of the present and future systems of special education, the development of a philosophy underlying intuitive arguments, and long-range planning for the best delivery of special services.

145. Northcott, W.H. A hearing-impaired pupil in the classroom. Volta Review, 1972, 74(2), 105-8, EC040987.

Hearing Handicapped/Regular Class Placement

Set forth are guidelines, originally written for use in the Minnesota public schools, to help the regular teacher who has for the first time a severely hearing-impaired student in her classroom. Discussion deals with effective integration of the deaf child into the class and achievement of a balance between maximum benefit from the experience for the deaf student and minimum disruption of normal classroom procedures. Touched upon are conditions affecting hearing and learning, how to secure class cooperation, optimum conditions for the deaf child's learning, and parental responsibility. (KW - Abs. from Council for Exceptional Children.)

146. Northcott, W.H. An experimental summer school: impetus for successful integration. Volta Review, 1970, 72(8), 498-507.

Hearing Handicapped/Legislation/Educational Planning/Parent Role/ Regular Class Placement/Teacher Training

147. Novack, H.S., Bonaventura, E. and Merenda, P.F. A scale for early detection of children with learning problems. Exceptional Children, 1973, 40(2), 98-105.

Assessment Techniques/Screening - Early Identification

148. Ohrtman, W.F. One more instant solution coming up! Journal of Special Education, 1972, 6(4), 377-81, EC051613.

Early Childhood Education/Mentally Handicapped/Regular Class Placements/Special Class Placements

In response to a paper by David Sabatino (EC 051 608), the author suggests that the resource room concept is no panacea for the ills of special education and that many of the services proposed are already being offered by many school systems. The rapid growth of special education and the lack of well-trained teachers are seen to be responsible for present abuses in special education. The desire to do away with labels is thought to result in ignoring etiological considerations. It is said that a high degree of individualization exists in many special classes and that improvement of instruction is resulting in better performance by educable mentally handicapped students in special classes. Short-term intervention is not seen to ameliorate the chronic problems of many handicapped children. (DB - Abs. from Council for Exceptional Children.)

149. Panda, R.C. and Bartel, N.R. Teacher perception of exceptional children. Journal of Special Education, 1972, 6(3), 261-6, EC051019.

Teacher Attitudes/Teaching Strategies

Compared were the positive or negative perceptions of 10 exceptionalities in children by 20 regular teachers and 20 special education teachers. A rating scale consisting of nine bipolar adjectives (good-bad, ugly-beautiful, clean-dirty, large-small, strong-weak, rugged-delicate, active-passive, sharp-dull, and slow-fast) were used to represent evaluative, potency and activity factors of the following concepts: delinquent, gifted, mentally retarded, emotionally maladjusted, deaf, blind, epileptic, culturally deprived, speech impaired, crippled and normal. The results did not support the expectation that teachers with specific experience and specialized training would perceive exceptional children in a more favorable way than teachers having no experience or training with exceptional children. Compared to normals and gifted, exceptionalities were generally rated low on the factors, though exceptionalities involving physical impairments were rated higher than other exceptionalities. (DB - Abs. from Council for Exceptional Children.)

150. Peters, D.L. and Marcus, R. Defining day care goals: a preliminary study. Child Care Quarterly, 1973, 2(4), 270-275.

Administration Attitudes/Self-Concept/Behavioral Objectives/ Social Adjustment

Purpose: To compare the objectives for day care centers of program operators with those of early education experts.

Subjects: 40 day care centers were randomly selected from a list of 690 centers in Pennsylvania; 24 directors of these centers responded. Their responses were compared with those of 25 experts from the fields of early childhood development or education.

Procedure: A list of 72 objectives was developed and divided into three broad domains: 1. awareness of the student's physical world; 2. awareness of the social world; and 3. awareness of self. The objectives survey was mailed with a cover letter, and the subjects were asked to choose the 30 most desirable objectives of the 72 listed, with 10 coming from each domain.

Results: 13 objectives were selected with greater-than-chance frequency, and they are presented in a table. These selections indicate that day care operators are primarily concerned with obtaining a smooth-running center; therefore, they consider self-reliance (in dressing and grooming) and cooperativeness (in following teacher directions and respecting peers) as the most important and attainable goals. Development of language and gross motor skills are next in importance to the operators. The educational experts were concerned with the child's sensory development used in exploring his physical world and for discrimination purposes. Development of social cooperation was next in importance. The comparison

of the selections of the two groups indicates that the experts focus on long-range, process-oriented objectives, while the day care operators focus on short-term product-oriented objectives. The difference can be interpreted in two ways: 1. day care operators may be selecting objectives to suit personal needs (a trouble-free program), rather than those of the children; or 2. day care operators, in daily contact with the children, have assessed the present needs of the children and have chosen immediate and realistic objectives that must be met before long-range goals can be obtained.

Evaluation: The 72 objectives listed on the survey are never presented; therefore, it is impossible to judge if the survey was a valid one. Sample size is also too small on which to base important conclusions.

151. Pinkston, E.M., et al. Independent control of a preschool child's aggression and peer interaction by contingent teacher attention. Journal of Applied Behavior Analysis, 1973, 6(i), 115-24, EC051474.

Emotionally Disturbed/Peer Relationship/Teacher Attitudes/Social Adjustment/Behavior Objectives

The study investigated the role of contingent teacher attention in maintaining a preschool child's aggression to his peers, as well as an imposed use of contingent teacher attention to increase his low peer interaction. Aggression and peer interaction were analyzed independently as two baselines of a multiple baseline design, and each was subjected to at least one reversal. The multiple baseline design was used to examine three possibilities: that the high rate of aggressive behavior was in itself impeding the emergence of peer interaction; that contingent teacher attention could be used to maintain a reduced rate of aggressive behavior; and that a similar use of teacher attention could maintain an increased rate of peer interaction. The technique of largely ignoring the subject's aggressive behavior and attending instead to whatever child he was attacking decreased his aggressive behavior to an acceptable rate. Two reversals of this technique displayed experimental control, each recovering the high baseline rate of aggression. After the aggressive behavior was decreased for the final time, teachers attended to the subject only when he was involved in social interaction with peers, and they thus increased his social interaction to a high rate. Later, they withdrew their attention for social interaction and reversed the effect, and then recovered it. (Author - Abs. from Council for Exceptional Children.)

152. Puhek, L. Hooray we passed. Exceptional Parent, 1972, 1(5), 9-10, EC041384.

Physically Handicapped/Regular Class Placement/Parent Role

The mother of a seven-year-old boy with osteogenesis imperfecta describes arrangements made with an elementary school to enroll the boy in a regular first grade class. The mother attended class with the boy to alleviate the teacher's responsibility for any accidents. During the coldest winter months, the mother helped her son with schoolwork at home, with the assistance of the regular teacher and a school-to-home telephone hookup. Information is also given concerning the Osteogenesis Imperfecta Foundation, Inc., a new organization for parents of children with osteogenesis imperfecta. (KW - Abs. from Council for Exceptional Children.)

153. Rafael, B. Early education for multihandicapped children. Children Today, 1973, 2(1), 22-26, EJ069894.

Early Childhood Education/Multi-Handicapped/Regular Class Placement

Reviews activities of the preschool program for multihandicapped children operated by United Cerebral Palsy of New York City, Inc. (DS - Abs. from Council for Exceptional Children.)

154. Ramey, C.T. Children and public policy: a role for psychologists. American Psychologist, 1974, 29(1), 14-18.

155. Rapier, J., Adelson, R., Carey, R. and Croke, K. Changes in children's attitudes toward the physically handicapped. Exceptional Children, 1972, 39(3), 219-223.

Regular Class Placement/Physically Handicapped/Students' Attitudes

Purpose: To study attitude changes in normal children toward orthopedically handicapped children after a year of integration in the elementary school.

Procedures: A rating scale, loosely based on the semantic differential technique, with 20 pairs of polar adjectives describing children's characteristics, were administered to the group of normal children before integration and a year afterwards. The children were directed to circle one of the three phrases (don't need help, need help, need lots of help) that best told about physically handicapped children in each of the 20 categories.

Results: After a year of integrated school experience with physically handicapped children, nonhandicapped children perceived them not as weak, not in need of as much attention, and more curious than originally thought. Before mainstreaming, 34 percent of the normal children thought that orthopedically handicapped children needed lots of help, but after integration only 20 percent continued to maintain that attitude. On the

pretest, 75 percent of the normal children believed handicapped children as happy, smart, brave, unselfish and friendly, and the integration experience reinforced their original opinions. On the pretest, girls perceived handicapped children as being happier, wanting less help, and being less friendly and interesting than did the boys. On the post-test, no significant difference between boys and girls in their attitudes toward the handicapped children were found, a fact which indicates that contact with the special child results in the development of similar attitudes among both sexes, with the boys changing their attitudes more than the girls. An age analysis of the pretest results revealed that younger children perceived handicapped children in more extreme ways than did the older children, who tended to be more realistic. The experience of integration increased the difference in attitudes between younger and older children. All of the results are given in charts.

Comments: The study suffered from several limitations: reliability of the children's answers are not questioned; conditions of the testing situation are not presented; and student attitudes toward the testing are not discussed. Despite the weaknesses of the study, the results indicate that the integration of the orthopedically handicapped child into the regular classroom changes the attitudes of the normal children by making them more positive and more realistic. Educators involved in facilities development should make certain that schools have the physical capacity to handle both handicapped and nonhandicapped students.

156. Reger, R. What does "mainstreaming" mean? Journal of Learning Disabilities, 1974, 7(8), 57-59.

Regular Class Placement/Special Class Placement/Diagnostic-Prescriptive Teaching/Teaching Attitudes

The author points out the different meanings of mainstreaming. To some it means merely moving the self-contained special class into the regular school building. To some it means integrating the handicapped student into the regular class and developing resource programs to meet the needs of special students. To others it means total elimination of specialized grouping where the exceptional child is placed in the regular classroom to compete without help with his normal peers. Such a difference in approach points out that schools frequently have no appreciation of the real problems of special education when they move toward mainstreaming and, as a result, integration can be a devastating experience for the special child and the teacher untrained to cope with the situation. In moving toward mainstreaming, eight principles should be followed: 1. No child should be categorized with a label reflecting a gross diagnostic category; 2. Children should be evaluated with relevant instruments to determine those areas of strengths and weaknesses that relate directly to specific objective instructional actions; 3. All children should be housed in the regular school building; 4. Groupings of all children in the school should be based on defined needs; 5. Diagnostic and prescriptive services for children with special needs should be coupled with implementation services; 6. Consultation services to teaching personnel should have direct application to the instructional program; 7. Children with severe

disabilities will have to be grouped together for at least part of the day; and 8. The leadership of the school should work together on total program implementation and inservice training. It must also remember that even if these principles are followed, not all children can be effectively mainstreamed and should be left in a special education program.

157. Reynolds, M.C. Policy statement: call for response. Exceptional Children, 1971, 37, 421-433.

Economics/Legislation/Labeling/Parent-School Relationship

158. Richardson, S.A., Ronald, L. and Kleck, R. The social status of handicapped boys in a camp setting. The Journal of Special Education, 1974, 8(2), 143-53.

Physically Handicapped/Social Adjustment/Peer Relationship/Regular Class Placement

159. Rives, S. and Dasovich, M.O. Clearinghouse: incidence of examiners reporting a child's awareness of his speech patterns. Exceptional Children, 1971, 38(3), 266, EC040243.

Speech Handicapped/Student Attitudes

Final copies of evaluation reports by speech pathologists were reviewed to note any written report concerning a child's feelings about his speech. Selected at random were records of 90 children, ages 2-18, seen for speech and language evaluation. In only 32 reports was the child's response alluded to: in 11 of these instances children revealed their attitudes in informal conversation with the examiner, in 14 instances responses were gleaned through observation by the examiner, and in seven reports the mother's comments during the interview were the source of the report of child response. A direct correlation was found between amount of academic training of clinician and percentage reporting child's awareness of speech problem. Seventy-one percent of the seven examiners with doctoral degrees recorded child response, compared to 36 percent of the 66 examiners with Masters Degrees and 24 percent of the 17 examiners with bachelors degrees. (KW - Abs. from Council for Exceptional Children.)

160. Rochford, T. Identification of preschool children with potential learning problems. In R. Reger (ed.), Preschool programming of children with disabilities. Springfield, Ill.: Charles C. Thomas, Publisher, 1970, 17-28.

Learning Disabilities/Self-Concept/Screening - Early Identification/ Physical Facilities

A child with a learning disability is usually educated in a negative circle concept where family, school and society become anxious when he fails to learn in the same way as his peers or siblings; instead of understanding and helping the special child, these institutions continuously reinforce negative behavior and learning patterns by breeding in him a variety of frustrations, accompanied by a low self-concept. To prevent this negative happening, the child with a potential learning problem must be identified in his early years in order that intervention and remediation can begin at the preschool level before his problems are complicated by school failure. Unfortunately, 85 percent of children with a learning disability are not given appropriate help until the age of nine or 10, a time that may prove too late in the school career. To prevent such delays, a system is needed where all preschool children can be screened in motor, language, visual and auditory skills, in order that the special child can be identified and placed in an appropriate preschool setting that is fitted to the student's needs. The real problems in developing such a system are correct identification and placement, which involves defining preschool educational tasks, screening a child to see if he has the required skills to perform the tasks, gathering all background and developmental information on the child, and placing him in the best educational setting to remediate his disability. Evaluation centers, staffed by well-trained professionals, should be developed to screen all preschool children on a yearly basis, beginning as early as age two. It must be remembered, however, that screening involves only a prediction of possible problems, based upon present knowledge of what is needed for school success, and must be accompanied by teacher observation and parental interviews once the child is in school. After describing a self-devised screening test, the author emphasizes the need for standardized research on the preschool child's education and for an educational system that is structured to meet the individual needs of each student.

161. Rosenkranz, C. An experimental program for mainstreaming in three types of elementary schools. Bureau Memorandum, 1972, 13(3), 14-16.

Self-Concept/Student Attitude/Social Adjustment/Mentally Handicapped/ Regular Class Placement/Academic Adjustment/Peer Relationships

Purpose: To investigate the feasibility and desirability of mainstreaming EMR's in three very different types of elementary school settings: 1. the school with traditional self-contained classrooms; 2. the open classroom school with three learning pods; and 3. the multi-unit school.

Results: All the different measurements revealed that mainstreaming is a feasible situation and desirable for teachers, parents and EMR students in all settings. The achievement test showed that in reading, spelling and arithmetic, all three experimental programs were significantly more

effective in improving scores than the segregated classroom (a chart of scores is provided). In the multi-unit school where mainstreaming was in its second year of operation, regular students chose special students as friends as 43 percent of their choices, while in the other two programs, regular students almost never chose EMR students as friends. The semantic differential technique revealed that teachers showed no significant difference in attitudes toward regular or EMR students and felt that the EMR children progressed nicely and had a good attitude. The technique also showed that parents were most pleased with the open classroom mainstreamed program and least pleased with the traditional, segregated classroom. The self-concept and school attitude questionnaire showed that the children in the open classroom program had the highest average score and were most consistent in their answers; the mainstreamed EMR students in the traditional classrooms had the poorest scores.

Comments: Although this study produced positive results about mainstreaming, caution should be taken about generalizing the findings, for it was a one-year study involving only one classroom for each type of program, an undesignated number of children, and the validity of the measurement procedures is questionable. Facilities and curriculums of the program were not described.

162. Rosenkranz, C. Another look at mainstreaming. Bureau Memorandum, 1973, 14(2), 31-34, EC050697.

Mentally Handicapped/Regular Class Placement/Consulting Teachers/ Academic Adjustment

The report summarizes the results of four Title VI-B projects for educable mentally retarded (EMR) students and illustrates how mainstreaming (integration into regular classes on at least a part-time basis) or EMR students is being implemented by several school districts in Wisconsin. Academic gains of students in four programs are reviewed. Although numerous advantages of mainstreaming over self-contained special classrooms were cited in all projects, including good academic progress for many EMR students, it is also noted that mainstreaming is not appropriate for all students and that some did not achieve at their anticipated potential. (KW - Abs. from Council for Exceptional Children.)

163. Salvia, J., et al. Teacher retention of stereotypes of exceptionality. Exceptional Children, 1973, 39(8), 651-2, EC051819.

Mentally Handicapped/Teacher Attitudes

Investigated was whether 165 teachers in training (48 students of special education and 117 students of general education), when faced with three intellectually normal children who are improperly labeled as gifted or mentally retarded, would perceive the children as fitting the understood stereotype. Labels appeared to have some effect on the ratings of the SS, but the stereotype was not consistently maintained by the SS in light of conflicting perceptions. (DB - Abs. from Council for Exceptional Children.)

164. Shearer, M.S. and Shearer, D.E. The Portage Project: a model for early childhood education. Exceptional Children, 1972, 39(3), 210-19.

Early Childhood Education/Multi-Handicapped/Individualized Instruction/Parents's Role/Behavior Objectives/Curriculum/ Diagnostic-Prescriptive Teaching

165. Shepherd, B.D. Parent potential. Volta Review, 1973, 75(4), 220-224, EJ079632, EC051411.

Regular Class Placement/Parent Attitudes/Parents' Role

The father of two deaf children discusses reactions of parents to a child's disability and gives suggestions to improve communication among parents, clinicians and teachers in an integrated program. (DB - Abs. from Council for Exceptional Children.)

166. Shipe, D. and Miezitis, S. A pilot study in the diagnosis and remediation of special learning disabilities in preschool children. Journal of Learning Disabilities, 1969, 2(11), 579-592, EC020150.

Learning Disabilities/Early Identification

The article compares the effectiveness of two remedial programs, one emphasizing language and cognitive developments, and the other focusing on visual-motor functioning. A research strategy is suggested in which each child is used as his own control and the treatment is individually prescribed. (Author/RS - Abs. from Council for Exceptional Children.)

167. Shotel, J.R., Iano, R.P. and McGettigan, J.F. Teacher attitudes associated with the integration of handicapped children. Exceptional Children, 1972, 38(9), 677-683.

Regular Class Placement/Supportive Services/Resource Room/Teacher Attitudes/Teaching Strategies

Purpose: To determine if an integrated program with supportive resource room services would affect the attitudes of regular class teachers toward handicapped children.

Subjects: 128 regular classroom teachers were tested in six traditional elementary schools in three districts in Philadelphia, Pennsylvania; three of the schools were involved in the first year of mainstreaming with resource rooms, and three schools had self-contained special classes which were used as controls and matched according to size and proximity of student population.

Procedure: At the beginning and end of the school year, a 13-item yes-no questionnaire was administered to elicit teachers' attitudes toward: 1. mainstreaming with resource room support; 2. potential of handicapped children for normal academic and social adjustment; 3. their competencies for teaching handicapped children; and 4. the need for special methods and materials in teaching the handicapped.

Results: Few control and experimental teachers (around 14 percent) felt themselves competent to teach EMR or emotionally disturbed students without outside help; 56 percent, however, felt competent in handling L.D. students by themselves. Attitudes of the experimental teachers toward being competent with help improved 20 to 30 percent after they had experienced the benefits of supportive resource room help, but did not improve with the control group. Ninety-nine percent of all teachers felt special methods and materials were needed in teaching all kinds of handicapped children. Throughout the answers, both control and experimental teachers felt most positive about the L.D. child and least positive about the EMR student. The majority of teachers feel they can accept and work with the learning disabled child in the regular classroom. The teachers, however, indicated difficulty in accepting and working with the emotionally disturbed child, and the year of mainstreaming had little positive effect on the attitude of the experimental teachers toward the emotionally disturbed student. The EMR student was held in the lowest regard by both groups of teachers, and the decrease in favorable attitudes by the experimental group toward the EMR children after a year of mainstreaming indicates that many of these children do not academically and socially integrate well into the classroom. Other implications of the findings are also suggested. On all measures, the response of the experimental teachers became more negative and those of the control teachers more positive.

168. Smith, J.O. and Arkans, J.R. Now more than ever: a case for the special class. Exceptional Children, 1974, 40(7), 497-501.

Supportive Services/Regular Class Placement/Mentally Handicapped/ Legislation/Resource Rooms/Teacher Training/Individualized Instruction/ Physical Facilities

After a brief review of the history of special classes and of the legislation pertaining to the handicapped, an argument is presented for the special class as the only viable educational environment for the severely retarded student. It is argued that regular classes can never meet the requirements of the profoundly retarded because: 1. needed special equipment is too expensive to place in every classroom; 2. the regular class teacher is not trained to cope with the special problems of the severely retarded; and 3. the teacher-pupil ratio of regular classes is much too large for the teacher to give the special child the

needed individualized attention. Even the resource room approach cannot provide the severely retarded with the needed services, for it is impossible to equip each school properly or to provide a full supportive staff. The final argument is that it is only the special educator, with very specialized training, who can effectively and realistically set immediate and long-range objectives for the severely retarded student as he progresses developmentally in the areas of language, socialization, cognition, self-help and motor skills. Furthermore, the special educator can only function properly in a centralized setting, where all specia' equipment, architectural designs and supportive services can be share by all the retarded students in a region.

169. Smith, S.A. and Solanto, J.R. An approach to preschool evaluations. Psychology in the Schools, 1971, 8(2), 142-7, EC032342.

Learning Disabilities/Early Identification/Teacher Attitude

An evaluation program was devised in a New York school in order to learn as much as possible about the children about to enter school, so that the curricula could be set up to meet their individual needs. The evaluation consisted of a parent questionnaire, a formal evaluation of the child, and a discussion of the results and feedback to the parents. It was noted that the parents seemed more receptive to preschool testing of their children than they were to later school evaluations. A closer parent-teacher relationship was noted as a result of the clinical recommendations. A workshop for the teachers was set up to supplement the preliminary testing. The format was that each teacher would work with one child and concentrate in one area of deficiency only. The kindergarten curriculum was departmentalized as a result of the workshop so that children with the same area of deficiency could go to the class in which the teacher would work in that one particular area. Follow-up observations indicated success for children and teachers in producing educational change. (CD - Abs. from Council for Exceptional Children.)

170. Spicker, J. Diagnosis-based curriculum for psychosocially deprived, preschool, mentally retarded children. Exceptional Children, 1966, 33, 215-20.

Curriculum/Early Childhood Education/Social Adjustment/Academic Adjustment

A curriculum was developed for five-year-old psychosocially deprived, mentally handicapped children. The author tested the effects on social adjustment and on changes in intelligence and language.

171. Spogen, D. Take the label off the handicapped child! Education Digest, 1972, 38(1), 44-6, EC042695.

Regular Class Placement/Special Class Placement

The effects of disability labels and self-contained classrooms on the educational and social development of educable mentally retarded, emotionally disturbed and neurologically-impaired children are said to be harmful. The undesirable effects of labeling cited include the isolation of handicapped children from their school peers, insulation from many learning activities and separation from their own communities. Described is an approach involving the conversion of special education classrooms into resource rooms and the assignment of handicapped children to regular classrooms which they left only for short periods of specialized instruction. (GW - Abs. from Council for Exceptional Children.)

172. Stern, V.W. Finger paint on the hearing aid. Volta Review, 1969, 71(3), 149-54, EJ002493.

Hearing Handicapped/Early Childhood Education/Parent-School Relationship/Peer Relationship/Regular Class Placement

173. Stevenson, H.W. Studies of racial awareness in young children. In: W.W. Hartup and N.L. Smothergill (eds.), The young child: reviews of research. Washington, D.C.: National Association for the Education of Young Children, 1967, 206-213.

Peer Relationship/Early Childhood Education

A review of research aimed at finding out at how early an age racial awareness begins and how children respond to identifying themselves as members of a particular race. Three studies of preschool children's behavior in interracial groups are discussed. At this age, there is dawning awareness of racial differences and, for some children, a concern about their own racial status is generated. Findings on interaction preferences were interesting, but mixed from study to study. Six studies using structured materials such as drawings and dolls to depict racial differences between negroes and caucasians are reviewed. Realistic identification of race increases to age seven. White children as young as age five can hold negative attitudes toward negro children. Negro children learn that white is to be desired and dark, regretted.

174. Strother, C.R. Psychological aspects of learning disabilities. In: State of the art: where are we in learning disabilities?, ACLD and CANHC Publications, 1974, 29-36.

Early Childhood Education/Learning Disabilities/Early Identification/ Behavioral Objectives/Diagnostic-Prescriptive Teaching

Although the psychological knowledge concerning the nature and treatment of learning disabilities in the past has been vague and sometimes incorrect, considerable progress is now being made toward proper understanding, diagnosis and treatment. A brief review of the history of recognizing and treating learning disabilities is presented. Early efforts at education were not very successful, for diagnostic procedures were inappropriate and a single method of instruction was employed for the great variety of learning disabilities.

The author reviews the current research, but finds the results are equivocal; he, therefore, states his own opinion. An interrelationship exists between sensory-motor, perceptual and cognitive developments, and when a specific motor disability is recognized in a young child, it can be improved through training, an improvement which, in turn, will lead to better reading skills. To reach all L.D. children with proper remediation, tests must be designed to assess the cognitive processes so that children with specific disabilities can be identified, classified and referred for appropriate remediation in a homogenous subgroup.

175. Tenorio, S.C. and Raimist, L.I. A non-categorical consortium program. Exceptional Children, 1971, 38(4), 325-6, EC040755.

Learning Disabilities/Teaching Strategies

Described is an experimental program in which students with behavioral and/or learning difficulties are helped within the regular classroom by a diagnostic-prescriptive teacher or a crisis-resource teacher. Results of the three-year program suggest that many problem students can be maintained in the regular classroom with supportive services. (CB - Abs. from Council for Exceptional Children.)

176. Thompson, A.C. Ethical practices in learning disabilities: survey of the problem. Division for Children with Learning Disabilities Newsletter, 1972, 2(2), 22-28, EC051231.

Learning Disabilities/Screening - Early Identification/Teacher Training/Parent Role/Special Class Placement

Educators serving children with learning disabilities are said to encounter issues of ethical practice in the following areas: the climate of services to the handicapped, the identification of handicapping conditions, labeling of handicapped persons, psychological testing and case study, teacher training, the relationship between general education and special education, financial considerations, parent involvement and private schools. Ethical issues are thought to arise, among other reasons, because the expectations which observers use as criteria of deviancy are developed and nourished by a variety of influences, because educational resources may be exhausted by psychological testing case

studies which have little effect on the child's educational experience, and because information and conclusions about children's handicaps are often casually relayed, contradicted or disregarded. Listed are assumptions often made in special education which the author believes to be uncertain, and therefore potentially erroneous and open to abuse.

177. U.S. Office of Education. Aid for education of the handicapped. American Education, 1974, 10(6), 29-33.

Teacher Training/Supportive Services/Legislation/Economics

178. Vacc, N.A. A study of emotionally disturbed children in regular and special classes. In: N.J. Long, W.C. Morse and R.G. Newman (eds.), Conflict in the classroom: the education of children with problems (2nd ed.). Belmont, Calif.: Wadsworth Publishing Company, Inc., 1971, 302-306.

Regular Class Placement/Special Class Placement/Academic Adjustment/ Emotionally Disturbed Children/Social Adjustment

The purpose of this study is to measure changes in academic achievement and in overt social behaviors of emotionally disturbed children who are in both special and regular elementary classes, and to assess the social position of emotionally disturbed children and normal children in regular classes.

The author concludes that: 1. Emotionally disturbed children in the regular classes achieved less on the Wide Range Achievement Test than did the emotionally disturbed children who were in special classes; 2. Emotionally disturbed children in special classes made positive changes in overt social behaviors, while the emotionally disturbed children in the regular classes showed negative changes in social behaviors; 3. The emotionally disturbed children in the regular classes were less accepted and more rejected than the normal children; and 4. The percentage of the most popular students was greatest in the normal group; the percentage of rejectees and isolates was greatest in the emotionally disturbed group.

179. Valletutti, P. Integration vs. segregation. The Journal of Special Education, 1969, 3(4), 405-9.

Special Class Placement/Teacher Attitudes/Teacher Training/Regular Class Placement

Arguments in favor of the validity of special class placement for exceptional children are discussed. In the push for integrated classrooms, little attention has been paid to the effects of such a movement on the teacher, yet the education institution must concern itself with the needs

of the teacher, as well as those of the students. Many teachers may have sent students to the special classroom with the belief that special education provides a socially and educationally acceptable means of removing deviates who disrupt normal learning processes from the class. If such students are returned to the regular classroom, the teacher may feel threatened and react negatively to the child seen as non-learning and non-malleable. The teacher's attitude may be more destructive than beneficial toward the special child and, as a result, everyone in the classroom, the exceptional child, the normal child, and the teacher, suffers. If integration is to occur, the administration must carefully delineate the attitudes and values of each teacher and discover which pupil characteristics a teacher can accept. Before such teacher evaluation can occur, much research and retraining must be performed. The non-acceptance of the special child in the regular classroom is another argument against integration. Research has shown that the exceptional child has difficulty in achieving status with his normal peers in the regular classroom. In the special class situation, the more advanced retardates are afforded leadership status, and other children in the special class do not feel as threatened. Research has also shown that special class placement enhances progress in the more able retardates and does not negatively effect the other students' progress. Therefore, special class placement may be advisable to ensure the least damage academically and psychologically to some special children. Even if the special classroom is not presently ideal, it probably serves the EMR child better than placing him in the regular classroom with a teacher who resents his presence. At least the special educator is trained to work with exceptional children and is prepared to cope with their problems. The main issue in the question of special education really becomes not one of segregation versus integration, but one of teachers' effects, values and attitudes toward all children in the classroom.

180. Warner, F., Thrapp, R. and Walsh, S. Attitudes of children toward their special class placement. Exceptional Children, 1973, 40(1), 37-38.

Special Class Placement/Mentally Handicapped/Student Attitudes/ Social Adjustment

The authors of this article see new educational programs being suggested and implemented without the benefits of knowing whether or not the existing programs are meeting the affective needs of the children in special classes for the mentally retarded.

Purpose: To determine and analyze the expressed attitudes of children in special classes for the educable mentally retarded.

Method: Asked five open-ended questions about how EMR's felt about their class placement.

Sample: 369 children in special classes for EMR's in California (IQ range from 56 to 74; mean 66.1). Ages: 8.9 to 17.6 years.

Results: Sixty-one percent liked being in special classes. Only 10 percent perceived themselves as mentally retarded. The younger the children, the more favorable their opinions about special classes.

The authors see EMR's as capable of clearly communicating their feelings regarding their educational placement, and they conclude that the special class is a "generally stimulating and comfortable placement for children who have had difficulty in adjusting to other placements in the educational system."

Comment: One must keep in mind the possibility of children's "parroting" what they have been told, and thereby giving the socially desirable answer. Also, conclusions drawn about special class placement, based on this small amount of data, are not warranted, especially since no EMR's in regular classes were interviewed for comparison. However, the possibility of using direct questions as part of an exploratory multi-faceted approach to the study of EMR adjustment and attitudes does seem worthwhile.

181. Weikart, D.P. Relationship of curriculum, teaching and learning in preschool education. In: J.C. Stanley (ed.). Preschool programs for the disadvantaged. Baltimore: Johns Hopkins University Press, 1972, 22-66.

Early Childhood Education/Curriculum

Weikart discusses three basic questions concerning preschool education: 1. Does preschool make a significant difference in later school performance of disadvantaged children? 2. If preschool education does make a difference, does it matter which curriculum theory or method is employed? 3. Can we guarantee effective preschool education?

He then goes on to ask: What evidence is used to judge impact? Intelligence tests, creativity or problem-solving tests, attitudes toward education and society, others? The author sees lack of agreement on criteria as a major stumbling block to valid comparisons.

In evaluating a three-year Curriculum Demonstration Project, and comparing results with other research on the impact of preschool education on intellectual development, Weikart finds that the current compensatory preschool projects all tend to support one specific conclusion: "Experimental projects in which researchers have direct control of curriculum, the operation of the project and the research design, seem to offer potential for immediate positive impact in terms of stated goals -- other studies point out the fragility of these conclucions when applied to the field beyond the special research projects" (p. 28).

Weikart compares four categories of preschool programs:

- programmed - teacher initiates, child responds (e.g., B-E).
- child-centered - child initiates, teacher responds (e.g., Banks Street).
- open framework - teacher initiates, child initiates (e.g., Karnes, Weikart).
- custodial - teacher responds, child responds.

Conclusions: The operational conditions of an experimental project are more potent in influencing outcome than is the particular curriculum employed; the children profit intellectually and socio-emotionally from any curriculum based on a wide range of experiences; curriculum is for the teacher, not the child, as it provides the essential planning and supervision. The final conclusion is that one is "free to develop or employ any curriculum that can be adapted to the needs of the children and the requirements of the staff model" (p. 57).

182. Weiner, L. They spot learning problems early. Instructor, 1973, 82(5), 108-9, EJ06 8841.

Learning Disabilities/Special Class Placement

This article describes preschool screening for developmental learning delays, and a special kindergarten program to treat learning disabilities. (SP - Abs. from Council for Exceptional Children.)

183. Weininger, O. Integrate or isolate: a perspective on the whole child. Education, 1973, 94(2), 139-147.

Learning Disabilities/Special Class Placements/Supportive Services/ Teacher Attitudes/Self-Concept/Teacher Training/Regular Class Placements

After briefly reviewing the historical development of educating the child with a specific learning disability, the author proposes that isolating the special child for remediation is academically and psychologically the wrong approach for two very important reasons: 1. The isolated student becomes different in the eyes of other children and in his self-image, a difference which often causes him to miss out on very important peer interaction; and 2. The child who is expected to do poorly tends to do poorly. The logical solution to the problems of isolation is the integration of the learning disabled child into the regular classroom, with extra support for both teacher and student from resource personnel. Two reasons are presented for its validity: 1. The experiences of the learning disabled child can be integrated into a total school experience in order to stimulate his ability to be curious, to experiment, and to know that he can achieve; and 2. The specific academic needs of the child can be met by placing him into academic classes at his grade level, in

order that he can learn peer stimulation. Only a small percentage of special children would not benefit from a program of integration, especially if learning disabilities are identified early. The main problem that now exists is training the teacher to detect the learning-problem child in the early grades, so that the education of the whole child can begin at a time when children tend to be less critical and before the special child is accepted as different.

184. Welch, D. Educational modulation center; model for education of learning disability children. Kansas Studies in Education, 1969, 19(3), 1-33, EC022669.

Learning Disabilities/Regular Class Placement/Early Identification/ Modeling

The Educational Modulation Center in Kansas is described; its purpose is to provide a model for assisting children with educational problems to remain in regular classes. The role of the educational team and the diagnostic/prescriptive approach are discussed. Additional areas of concern explored are the following: identification of subsamples within a general learning disability sample, behavior modification instruction for parents, the effects of a visual motor training program on kindergarten children, and an investigation of speech discrimination ability of children with learning problems. A survey of services provides data on the number and percent of exceptional children receiving special education in Kansas. (RJ - Abs. from Council for Exceptional Children.)

185. Whorton, G.P. The hard-of-hearing child: a challenge to educators. Volta Review, 1966, 68(5), 351-3, EC023431.

Hearing Handicapped/Regular Class Placement/Teacher Training

Regular classroom teachers should be better prepared to handle children with slight-to-moderate hearing losses who usually remain in regular school classes. Little attention has been given to their educational and psychological needs, yet because of inaccurate diagnosis these children are often thought to be emotionally disturbed, mentally deficient or withdrawn. Specialized help during the critical ages two to eight could mean the difference between educational success and failure. Community provisions for testing the hearing of all children during infancy or early childhood could prevent a permanent loss or indicate the need for specialized instruction. In addition, teacher training centers in the United States should teach about hearing and the psychological and educational implications of hearing loss. Although children with severe handicaps are in special classes, educators must not overlook children with minimal or mild sensory deficiencies. (JD - Abs. from Council for Exceptional Children.)

186. Wolfensberger, W. and Kurtz, R.A. Use of retardation-related diagnostic and descriptive labels by parents of retarded children. Journal of Special Education, 1974, 8(2), 131-142.

Mentally Handicapped/Labeling/Parents' Role

Although most parental ratings were consistent with their children's intelligence as assessed by psychological testing, the parents in this sample were reluctant to accept any kind of label for their children that would carry a designation of retarded. Ninety-three percent saw it as appropriate in general, but only forty-two percent thought it appropriate for their own children.

Purpose: To cast light on the meaning of terminology to parents of the retarded.

Subjects: 105 parents of children who had been referred to a developmental evaluation clinic.

Procedure: Terminology checklists to be filled in three times: first, terms about retarded that these parents had heard of; then ones they considered appropriate for retarded children in general; and last, the terms they considered appropriate to their own children.

Results: See above.

Comment: The article points up how emotionally-laden labeling terms are. Although certainly not rigorous in the methodological sense, this study is very useful in pointing up parents' perceptions of their own retarded children and the care anyone working with them must use in labeling the children. The authors favor diagnostic categories of labeling.

187. Yates, J.R. Model for preparing regular classroom teachers for "mainstreaming." Exceptional Child, 1973, 39(6), 471-472.

Teaching Strategies/Regular Class Placement/Teacher Training

Purpose: To evaluate a laboratory/experimental approach to preparing in-service teachers for mainstreaming.

Subjects: Thirty out of 40 teachers from kindergarten through fifth grade served as an experimental group. They received approximately 100 hours of instruction via the laboratory/experimental method.

Procedure: Pre- and post-test data for the entire 40 were obtained on three personality instruments on the Special Education Information Questionnaire (Yates, 1971) and on the Classroom Integration Inventory (Haring, 1958).

Results: Teachers who had undergone training scored significantly higher on the Special Education Information Questionnaire. On the Classroom Integration Inventory, they more frequently thought that children of limited or superior intelligence and those with seizure status could be successfully integrated into regular classrooms. (This suggests that students with less visible handicaps might initially be considered for integration). Thus, the training program did produce positive change.

Comment: The article tells us no details of the training program. Further, it lacks meaning, since this particular training approach was not compared to any other.

188. Abbott, R.E. Developmental kindergarten classes of the Waukegan community unit School District No. 60. Springfield, Ill.: Office of the Superintendent of Public Instruction, Department for Exceptional Children, 1971, EC041403.

Early Childhood Education/Special Class Placement/Early Identification

Described is the special developmental kindergarten program for children who score poorly in the Waukegan (Illinois) early evaluation program. Set forth are program rationale, structure, admission procedures, student reports and records, general curriculum and materials of the program, and basic teaching techniques. The emphasis of the program is upon the development of language, visual, motor, perceptual, listening, and social-mental health skills, as well as behavior modification. The program allows for early identification and evaluation of the children's problems, be they cognitive, social or emotional, and planning of the most beneficial educational placement for the children. (KW - Abs. from Council for Exceptional Children.)

189. Abeson, A. and Blacklow, J. Environmental design: new relevance for special education. Reston, Va.: Council for Exceptional Children, 1971.

Physical Facilities

In order to find out what teachers and administrators considered to be the most important architectural elements for an optimum learning environment, questionnaires were sent to 495 administrators and 2,475 teachers (66.9 percent and 54.4 percent responded, respectively). The authors obtained frequency distributions of the data and isolated the schools that demonstrated the most effective planning for handicapped children.

Information on integration of facilities for handicapped and regular students showed that the most frequent integration occurred in physical education, assemblies, music, lunch and arts and crafts.

Also pointed out was the need to eliminate architectural barriers to facilitate integration of the physically handicapped.

Other factors included size of learning space, accessibility and safety of equipment, need for cooler temperatures, better lighting, quieter rooms, allowances for small groups and concentrated one-to-one work, eye level contact with adults, observation systems, transportation, ease of movement, and large muscle equipment.

190. Ackerman, P.R. and Moore, M.G. The delivery of educational services to preschool handicapped children in the United States: the state of the art - 1974. BEH/U.S. Office of Education, Department of Health, Education and Welfare.

Multi-Handicapped/Early Childhood Education/Educational Planning/Legislation/Teacher Training

This paper begins with a reminder that a discussion of the education of preschool handicapped children is necessarily based on obsolete data; that the field is in a phase of highly-accelerated evolution. The authors go on to say that this field is one which is not yet based on substantive evaluation of data. No one has yet "proved" the value of various types of preschool educational programing for the handicapped.

The paper also discusses the impact of Federal legislation, particularly the Handicapped Children's Early Education Act and the programs developed under its aegis, including Head Start. Other issues discussed include the role of private organizations, personnel training efforts, state laws, as well as program models, research funded by the government, and other relevant issues. The document includes specific data on projects and fundings patterns, as well as recommendations for priorities in research concerning the education of young handicapped children.

The book also includes a review of previous research, methodology and possible future research, and reiterates the need for planning and cooperation between architects and educators.

Comment: Would have been helpful if the authors had included more of the original data on responses.

191. Adapting materials for educating blind children with sighted children. Albany, New York: New York State Education Department, Bureau for Handicapped Children, EC023358.

Visually Handicapped/Regular Class Placement/Academic Adjustment/ Administrative Attitudes

Specific materials which can be adapted for use by blind children who are integrated with sighted children are illustrated by photographs and are described in terms of use, necessary skills and objectives. In the areas of readiness, academic skills and small group activities for kindergarten and intermediate grades, such materials as the following are included: tactile books, puzzles, braille readiness materials, experience charts, workbooks, flashcards, self-teaching activities, word wheels, manipulative aids and others. (RD - Abs. from Council for Exceptional Children.)

192. Ahr, A.E. and Jarvis, G.M. Screening procedures for preschoolers and pupils in school. Skokie, Ill.: Priority Innovations, Inc., 1970.

Early Childhood Education/Assessment Techniques

Identifying exceptional children before or during their early school years is a very necessary function of school districts. To make certain that each child is checked for possible learning disabilities, a preschool screening system, as well as a system for each child enrolled in school, should be developed. Diagnostic screening should include each of the following areas: vision, hearing, speech and language, medical examination, physical handicaps, mental retardation, mental capacity, academic achievement, specific learning disability, emotional adjustment and social adjustment. A chart is provided that indicates age for initial screening, acceptable screening intervals and primary responsibility for the screening measure. If first grade or preschool screening indicates development of a learning problem, early intervention should be encouraged. Directions are given for establishing a comprehensive screening program, including development of a policy statement, implementation of a specific procedure, staff involvement and coordination, obtaining developmental data on the child from the parent, and structuring the sequence of events in the actual screening program. Methods of screening are also discussed.

Group readiness tests should be the initial screening device on which special referrals are made. Regular teacher observation and observations by various specialists on the school staff are also important means of referrals. Group-administered achievement tests are valuable as an objective measure of pupil progress in various academic areas, but they are secondary in a comprehensive screening program. A group intelligence test should be used in conjunction with the achievement tests so that a comparison can be made between ability and progress, in order to discover if a discrepancy exists. Finally, a comprehensive review of each individual pupil's records should be made at least once a year. The specific functions and responsibilities of the school staff, from the board of education through the regular classroom teacher and the school nurse, in the screening program are outlined. Also included are expected prevalance rates by categories and a model information sheet.

193. Anderson, W. Who gets a special "education"? In: M.C. Reynolds and M.D. Davis (eds.), Exceptional children in regular classrooms. Minneapolis: U.S. Office of Education, Bureau for Educational Personnel Development, Grant OEG-0-9-33605(725), 6-11.

Mentally Handicapped/Regular Class Placement

194. Birch, J.W. Mainstreaming: educable mentally retarded children in regular classes. Reston, Va.: Council for Exceptional Children, 1974.

Individualized Instruction/Supportive Services/Labeling/Resource Rooms/Educational Planning/Teacher Training

Mainstreaming, based on the principle of educating both normal and special children in the same classroom and providing special education on the basis of learning needs rather than categories of handicaps, is a valid alternative to self-contained special classes for appropriately-selected pupils and teachers. Its benefits are numerous: 1. Special children are not labeled or excluded from association with their peers; 2. Regular and special teachers share their skills and knowledge to teach the same children; 3. An emphasis is put on individualized instruction; and 4. A spectrum of services is provided for all children to meet their learning needs. In many school districts, the goal of high-quality education for exceptional children in the regular class is commanding top attention for a number of differing reasons: 1. the questionable efficacy of special classes; 2. financial considerations; 3. the capability of delivering special education in a new environment because of improved instructional apparatus; 4. direct and forceful parental intervention for their special children; 5. rejection of the process of labeling; 6. court actions granting the right to free education for all children; 7. the questionable accuracy and value of psychological testing; 8. overassignment of the retarded label to children, especially to those from minorities; 9. positive attitude changes in nonhandicapped students toward handicapped ones during the integration; and 10. America's basic philosophy of diversity in an educational setting. Although no one of these reasons is responsible for the change to mainstreaming, various combinations of them have caused many school districts to begin the integration of special education into the regular program. Since it is the author's belief that more and more school districts will begin to mainstream, he directs the book to teachers and administrators who are contemplating the change. After defining the terminology and presenting the rationale of mainstreaming, he presents the experiences of school systems which have implemented integration through the resource room or teacher approach.

The principles that have made mainstreaming successful are synthesized and presented in the final chapter as a guide in the planning and operation of integration. These principles include the necessity of in-service education for all teachers on a continuing basis; sensitive administration, especially toward pupil placement; diagnostic-prescriptive teaching; local school autonomy; involvement of parents; well-designed facilities; and proper learning materials and equipment that aid in individualized instruction.

195. Borders-Patterson, A., Huff, J., Nengel, W. and Gallagher, J.J. Report on the 1973-1974 state department of public instruction categorical learning disabilities program. Chapel Hill: Frank Porter Graham Child Development Center, University of North Carolina, 1974.

Learning Disabilities/Educational Planning/Teacher Training/ Program Evaluation

In 1973 the North Carolina General Assembly passed legislation to increase support of special education programs for children with learning disabilities. Fifty teaching positions were provided to school systems to deliver special services to learning disabled children. Data for this study were collected by questionnaires sent to the teachers employed in the program and on-site interviews with educational staff. The study was contracted by the State Department of Education to provide information regarding the students, the teachers and their training, and the contents of the program. It described some promising program components and the role of the various educational services connected with the learning disabilities program. Recommendations for future development are given.

196. Braun, S.J. and Lasher, M.G. Preparing teachers to work with disturbed preschoolers. Cambridge, Mass.: Nimrod Press, Inc., 1973.

Teacher Training/Teaching Strategies/Parent Role/Curriculum/ Individualized Instruction/Emotionally Disturbed Children/Early Childhood Education

197. Bricker, D. and Bricker, W. Toddler research and intervention project report - year 1. IMRID Behavioral Science Monograph, No. 20, 1971, ED059559.

Early Childhood Education/Mentally Handicapped

The report summarizes the first year of the Toddler Research and Intervention Project, a research program to devise and evaluate different aspects of educational intervention with children, ages 1-4 years, with moderate-to-severe development problems (primarily mental retardation). Described are the children who composed the intervention group, the physical classroom environment, classroom procedures, results of the first eight months of intervention, initial investigations of language and cognitive training, and the parent training program. Also described are nine research projects carried out on the delayed and nondelayed young children involved, investigating such areas as effects of reinforcement schedules on acquisition of stimulus control, Piaget's object permanence concept, motor imitation, contingent social stimulation of vocalizations, skills, and receptive vocabulary skills and learning. (Abs. from ERIC - Early Childhood Education Project.)

198. Budoff, M. Comments on providing special education without special classes. Studies in learning potential, 2(25). Cambridge, Mass.: Research Institute for Educational Problems, 1971, ED058707.

Regular Class Placement

The discussion of educating handicapped children without special classes emphasizes the importance of looking at the educational process in socio-psychological terms. Referred to are some of the unsuccessful results of segregating students, such as achievement of similar or smaller academic gains, perpetuation of much of the mild mental retardation observed in schools (particularly that which is culturally influenced), and psychological damage to the segregated students. Removal of the stigma attached to special class placement and development of social skills are seen as major reasons for integration in a regular class with support services provided as needed. Discussed are considerations relating to the feasibility of regular class placement: flexibility of school structure; amenability of regular teachers; age, ability and achievement range of school population; suburban versus urban students and their particular problems; degree of handicap; and ability to make learning potential assessments. (KW - Abs. from Council for Exceptional Children.)

199. Butefish, B. and Mattson, B. What the research says about teaching the educable mentally retarded in the regular classroom. Lubbock, Texas: West Texas School Study Council, 1965, ED014184.

Mentally Handicapped/Early Identification/Regular Class Placement/ Teacher Training

This study of the literature has as its main purpose the publication of a functional teaching guide for teachers with educable mentally handicapped (EMH) students in regular classrooms. The guide is organized around a series of questions: 1. Who are the educable mentally handicapped? 2. How can they be identified and educational objectives formulated? 3. In what general ways can the regular classroom teacher help them? 4. What are general and specific teaching techniques? 5. How can progress be evaluated? and 6. What federal aids are available? A number of characteristics are described, and techniques and procedures which have proved useful in teaching EMH children are presented. A bibliography of 45 items is included. (DF - Abs. from Council for Exceptional Children.)

200. Calovini, G. (ed.). The early identification of exceptional children. Springfield, Ill.: Department of Exceptional Children, Instructional Materials Centers.

Early Identification/Mentally Handicapped/Learning Disabilities/Self-Concept/Visually Handicapped/Hearing Handicapped/Teaching Strategies

201. Cansler, D.P. and Martin, G.H. (eds.). Working with families: a manual for developmental centers. Washington, D.C.: U.S. Office of Education, Bureau of Education for the Handicapped, Chapel Hill Training-Outreach Project.

Parent-School Relationship/Family Relationships/Parent Role

This is a manual designed to help teachers and administrators work with parents and siblings of children with special needs. It emphasizes family process, resources and individual differences.

202. Carrithers, L.M. Beginning reading patterns and preschool emotional problems. 1965, ED011223.

Emotionally Disturbed/Student Attitudes

Four hypotheses were investigated in a study designed to discover whether reading patterns and success during children's primary years could be anticipated from emotional classifications determined during their preschool years. It was hypothesized that children with emotional difficulties during preschool years would have more difficulty learning to read, would follow different reading patterns, and would have more negative attitudes. Also, it was hypothesized that assessment of emotional classifications during preschool would provide clues to later reading difficulties. In general, all hypotheses were accepted. (RM - Abs. from Council for Exceptional Children.)

203. Child development associate training guide (DHEW Publication No. (OHD) 74-1065). Washington, D.C.: Department of Health, Education and Welfare, Office of Child Development, 1973.

Teaching Strategies

204. Cicenia, E.F., et al. The challenge of educating the blind child in the regular classroom. Albany, New York: New York State Education Department, Bureau for Handicapped Children, 1957, EC022834.

Visually Handicapped/Regular Class Placement/Peer Relationship/ Social Adjustment/Parent-School Relationship

205. Collins, R.C. Transmittal notice - Head Start policy manual. Washington, D.C.: Office of Child Development, OCD No. N-30-333-1, 1973.

Regular Class Placement/Economics/Legislation/Educational Planning/ Screening - Early Identification

206. Curriculum: The Learning Center of Federal City College. Undated.

Curriculum/Cultural Influences/Special Class Placement/ Behavioral Objectives

207. Deno, E.N. (ed.). Instructional alternatives for exceptional children. Reston, Va.: Council for Exceptional Children, 1973, ED074678.

Regular Class Placement/Teacher Training

The monograph presents 15 papers on the provision of special education services within the regular classroom. Common areas of concern of many of the authors include the following: the separation of the regular and the special education systems is not educationally sound; traditional ways of labeling handicapped children are of limited educational value; evaluation of outcomes of educational intervention is a public concern; the team approach to diagnosis and treatment has not been as effective as anticipated; and much of the child's learning takes place outside the school. The first section on programs' training service strategies presents a paper on each of the following five models: statistician, learning problems, consulting teacher, diagnostic-prescriptive teacher and classroom specialist. Resource systems are discussed in four papers of the second section which present precision teaching at both the elementary and secondary levels, a resource system for the educable mentally handicapped, and a general special education resource teacher model. Considered in the third section on structural change approaches are structural reform in an elementary school, structural reform in a total school district, preparing handicapped children for regular class participation, and clarifying sub-system service responsibilities. The final section offers commentaries on future directions and innovations. (DB - Abs. from Council for Exceptional Children.)

208. Early childhood intervention in Illinois. State of Illinois, Office of the Superintendent of Public Instruction, 1974.

Early Childhood Education/Physical Facilities/Parent Role/ Legislation/Economics/Screening - Early Identification/Diagnostic-Prescriptive Teaching

209. Early childhood: papers presented at the 49th Annual International Convention of the Council for Exceptional Children. Reston, Va.: Council for Exceptional Children, 1970, ED039385.

Early Childhood Education/Screening - Early Identification/Multi-Handicapped

This report includes papers presented on early childhood at the 1970 Convention of the Council for Exceptional Children. Discussions are concerned with the effectiveness of teaching selected reading skills to two-to-five-year-old children by television, educational materials as an aid in evaluation of preschool multi-handicapped children, and the use of instructional materials with multi-handicapped preschool children. Additional papers present a progress report of a project in early identification and remediation of learning problems in elementary school children attempting to increase classroom success, and a panel of research findings with programs for preschool children and parents. (JM - Abs. from Council for Exceptional Children.)

210. Early childhood programs in the states: report of a December 1972 conference. Denver, Colo.: Education Commission of the States, 1973.

Legislation/Early Childhood Education/Parent-School Relationship

211. Edelmann, A.M. A pilot study in exploring the use of mental health consultants to teachers of socially and emotionally maladjusted pupils in regular classes. 1966, ED026292.

Emotionally Handicapped/Teacher Training/Culturally Disadvantaged/ Regular Class Placement

A pilot study exploring the use of mental health consultants to teachers of socially and emotionally maladjusted pupils in regular classes was conducted to help teachers cope with these children and to facilitate successful learning experiences for them, to enable teachers to be more effective with all children, understand effects of curriculum and teaching methods on children, and develop further methods for understanding and teaching both the advantaged and the disadvantaged. Advantaged and disadvantaged schools were selected; one of each was a control school, while the other six were experimental schools. Involved were 59 teachers and over 2,000 children. Six mental health consultants, assigned one to each experimental school, met with the same group of teachers weekly and were available for individual conferences. Pre- and post-questionnaires were administered to every teacher and child in the eight schools. Each consultant kept a log of the 15 weekly sessions, consultations and classroom visits. Results indicated that in the control schools, where there were no consultants, only negative behavioral and attitudinal changes occurred and that, to the extent that consultants and teachers together clearly defined the goals of their meetings, there were positive changes in teacher and student behavior. Included are 26 recommendations and the questionnaires used. (Abs. from ERIC - Early Childhood Education Project.)

212. Education of the handicapped. Title 18A: Chapter 46 and Amendments. Trenton, N.J.: Department of Education, Division of Curriculum and Instruction, 1973.

Curriculum/Regular Class Placement/Legislation/Physical Facilities/Economics

213. Fargo, G.A., et al. Evaluation of an interdisciplinary approach to prevention of early school failure. Honolulu: Hawaii University, 1968, ED031295.

Behavioral Objectives/Early Childhood Education/Diagnostic-Prescriptive Teaching/Teacher Training/Screening - Early Identification

Forty-two preschool children participated in this two-year Head Start research project conducted at the University of Hawaii. The objectives of the overall project were the following: to focus interest on the need for early intervention with poorly-functioning preschool children with the intent to offer services of a preventive rather than remedial function; to demonstrate the need for and value of an interdisciplinary approach to diagnosis and education planning; and to serve as a training function for prospective teachers and pediatric residents. Two other objectives were added for the second, or follow-up, year of the project: assessment of the ability of the members of the original disciplinary team to predict success in school at the preschool level and assessment of the progress of problem children who received the special education intervention. The objectives were successfully realized, and it was found that there was a need for more interdisciplinary services for children in Hawaii and a need for early identification of an educational and medical intervention with high-risk children. (WD - Abs. from Council for Exceptional Children.)

214. Findlay, J., Miller, P., Pegram, A., Richey, L., Sanford, A. and Semrau, B. A planning guide to the preschool curriculum: the child, the process, the day. Washington, D.C.: Office of Education, Bureau of Education for the Handicapped, Chapel Hill Training-Outreach Project.

Curriculum/Teaching Strategies/Individualized Instruction

215. Focus on children with underdeveloped skills: end of budget year report. Rockville, Md.: Montgomery County Board of Education, 1968, ED037845.

Academic Adjustment/Teacher Training/Early Childhood Education/Screening - Early Identification/Learning Disabilities/Self-Concept/Social Adjustment

Serving pre-kindergarten through fifth grade, the project was designed to improve the educational performance of children with learning problems (without regard to categorical labels) and thus support the work of the classroom teacher in the child's normal school setting. Team screening processes were developed to identify preschool or school-age children with learning problems; assessment, intervention and follow-up procedures were also developed, involving teaching teams and resource staff. In addition, continuing staff development and training procedures were provided for project personnel; the project was coordinated and integrated with the school system and the community; a record system was designed as a model for information collection, storage, and retrieval; and project evaluation procedures were developed and applied in terms of outcomes for individual children and for the school system. Appendices, comprising over half of the document, provide forms and other project material. (Author/JD - Abs. from Council for Exceptional Children.)

216. Gallagher, J.J., Aschner, M.H. and Jenne, W. Productive thinking of gifted children in classroom interaction. Reston, Va.: Council for Exceptional Children Research Monograph, 1967.

Assessment Techniques/Academic Adjustment

217. Gampel, D.H., Harrison, R.H. and Budoff, M. An observational study of segregated and integrated EMR children and their nonretarded peers: can we tell the difference by looking? Studies in learning potential, 2(27). Cambridge, Mass.: Research Institute for Educational Problems, 1972, ED062747.

Mentally Handicapped/Peer Relationship/Regular Class Placement

An observational study explored whether characteristic behavioral patterns of an educable mentally retarded (EMR) population were unique and served as a label for identification in the social milieu. Of particular interest were differences between EMR children who were integrated into the regular classroom and their nonretarded peers. A time-sampling method was used to count frequencies of 12 behavior categories selected to cover attention, deviance and communication issues. One of the clearest findings was that the integrated and special class children engaged in significantly less interpersonal interaction than did their nonretarded peers. Differences between the groups also emerged in terms of behavior patterning. Factor analysis of the behavior categories yielded three factors, one identified with the special class EMR's (unusual guy syndrome) and the other two correlated with the non-EMR control children (bad guy and good guy syndromes). The integrated children

were described less by an identifiable pattern of their own than by the absence of a pattern. It was thought that the integrated children may be avoiding engaging in any noticeable active behaviors. (For related studies, see also EC042063 and 042066.) (Author/CB - Abs. from Council for Exceptional Children.)

218. Glockner, M. Integrating handicapped children into regular classrooms, with abstract bibliography. Urbana, Ill.: ERIC Clearinghouse on Early Childhood Education, 1973, ED0130047.

Regular Class Placement/Teaching Strategies/Parent Role

219. Glockner, M. Integrating handicapped children into regular classrooms. Urbana, Ill.: ERIC Clearinghouse on Early Childhood Education, 1973, ED081500.

Regular Class Placement/Teacher Attitudes/Parent Role/Academic Adjustment

This document is based on an interview with Dr. Jenny Klein, Director of Educational Services, Office of Child Development, who stresses the desirability of integrating handicapped children into regular classrooms. She urges the teacher to view the handicapped child as a normal child with some special needs. Specific suggestions for the teacher are given: 1. Learn the details about handicaps that may be encountered; 2. Work supportively with parents and find out as much as possible about the child; 3. Arrange for the child's gradual transition into a classroom setting; 4. Be aware of the range of normal behavior for the age group involved; 5. Have positive but realistic expectations and focus on the child's strengths; 6. Enforce the rules and limits of the class; 7. Deal with the other children's reactions to the handicapped student; and 8. Acknowledge personal feelings, attitudes and levels of frustration. A short abstract bibligraphy on exceptional children is included. (DP - Abs. from Council for Exceptional Children.)

220. Goldstein, H. The efficacy of special class training on the development of mentally retarded children. Urbana, Ill.: Institute for Research on Exceptional Children, Illinois University, 1965, ED002907.

Mentally Handicapped/Academic Adjustment/Special Class Placement/ Regular Class Placement/Social Adjustment

A comparison was made of the intellectual development, academic achievement, and social and personal adjustment of educable mentally retarded children enrolled in special classes and their peers in regular grades. About

125 children beginning first grade and having a mean IQ of 75 (Stanford-Binet scale) were divided randomly into an experimental group and a control group. A series of intellectual, academic and personal adjustment measures were administered to all the children annually for four years. During this period, an attrition of about three-fourths of the original sample took place. This, however, did not significantly affect the study results.

There were no statistically significant differences in IQ gains between the special classes group and the regular grades group; several social factors were found to be related to increases in IQ. The analysis of academic achievement indicated that the special class was beneficial to children whose IQ's are 80 and below, but that it was not necessarily an effective educational setting for significantly improving academic achievement of children, usually classified as borderline or slow learners, who have IQ's above 80. Findings on personal adjustment showed that special classes encouraged the retardates to display originality and flexibility in their thinking. (JH - Abs. from Council for Exceptional Children.)

Comment: Considered by many to be methodologically the most rigorous of the studies comparing segregated versus integrated education. One of the few longitudinal studies in the area.

221. Goodman, H., Gottlieb, J. and Harrison, R.H. Social acceptance of EMR's integrated into a nongraded elementary school. Studies in learning potential, 1(20). Cambridge, Mass.: Research Institute for Educational Problems, 1971, ED050510.

Peer Relationship/Regular Class Placement/Mentally Handicapped/ Multi-Graded Classrooms/Community Attitudes

Purpose: To determine whether a particular educational model, the non-graded elementary school, will enhance the social acceptability of educable mentally retarded (EMR) children integrated into it. The chief reason for the selection of a nongraded elementary school is that all children in the school are accustomed to working at their own pace and to receiving remedial attention; therefore, the stigma of academic failure is minimized.

Subjects: The school is divided into two units: the primary (first, second and third grades; 54 normal students and six EMR's) and the intermediate (fourth, fifth and sixth grades; 69 normal students and four EMR's). In addition, there is a segregated classroom for eight EMR's at the intermediate level.

Procedure: Twenty intermediate-level and 16 primary-level normal children equally divided among the ages were administered the Peer Acceptance Scale, an experimental sociometric instrument.

Results: The normal children labeled the EMR's "friend" less often and "wouldn't like" more often than they did other normal children. Even in the nongraded elementary school setting, then, EMR's are still less socially acceptable than normal peers. Possible explanations are:

- The EMR's are bused in, while the normal students are neighborhood children.
- Remedial services are more visible for the EMR's, marking them as different.
- Behavior problems, rather than academic failure, may be the basis for rejection. Intermediate-level boys labeled the integrated EMR's "wouldn't like" significantly more often than they did the segregated EMR's. A possible explanation for this is that normal children may lower their standards of acceptable behavior when a child is labeled retarded.

Other findings: children at the primary level are more tolerant of everyone, EMR's included, so integrated placement should probably begin early. Girls are more tolerant of EMR's than are boys.

Comment: The results of this study are vitiated by small sample size, the uncontrolled factor of the busing of the EMR's, the absence of descriptive information on the subjects, and the absence of reliability and validity data on the sociometric instrument. Further, it sacrifies meaning for measurement; the questions raised can only be answered by finding out why the EMR's are rejected, but there is no attempt to do this. This is poor sociometry.

222. Gordon, R. The design of a pre-school learning laboratory in a rehabilitation center. 1969, ED032696.

Physical Facilities/Physically Handicapped/Early Childhood Education

A developmental setting for multi-handicapped preschool children and the physical layout of the classroom are described. Photographs and drawings of specially-designed educational equipment, such as a shallow sand-and-water table adapted for wheelchair-bound children and an adjustable easel that allows armless children to paint with their feet, show the use of the materials and their design construction. Commentary is included

which describes the function and purpose of each learning material, along with the history of the school, its medical setting and the educational philosophy of the program.

223. Gottlieb, J. and Budoff, M. Attitudes toward school by segregated and integrated retarded children: a study and experimental validation. Studies in learning potential, 2(35). Cambridge, Mass.: Research Institute for Educational Problems, 1972, ED062751.

Mentally Handicapped/Regular Class Placement/Student Attitudes/ Special Class Placement

The attitudes toward the education of retarded children in various school placements were investigated in two studies. The first study compared the attitudes of nonretarded children and educable mentally retarded children in segregated and integrated class placements. The results indicated that the segregated group posited significantly less favorable attitudes than did the other groups. Since subject selection was not random, a second study was undertaken in which retarded children were randomly assigned to integrated and segregated classes and on whom pre-integration data were collected. The results were similar to those in the first study, and were discussed in terms of the labeling process and its consequences for behavior. (For related articles, see also EC042062 and 042063.) (Author - Abs. from Council for Exceptional Children.)

224. Gottlieb, J., et al. A preliminary evaluation of the academic achievement and social adjustment of EMR's in a nongraded school placement. Studies in learning potential, 2(23). Cambridge, Mass.: Research Institute for Educational Problems, 1971, ED058705.

Mentally Handicapped/Academic Adjustment/Student Attitudes/Peer Relationships

The evaluation compared the social adjustment and academic achievement of seven educable mentally retarded (EMR) elementary school children who were integrated into a nongraded school with seven comparable EMR's (matched on IQ, sex and SES) who were assigned to segregated special classes. The results indicated that integrated children had significantly more tolerant attitudes toward school and that they reported more favorable scores, although not significantly so, on locus of control, self-concept and standardized achievement testing. Segregated special class children were found to be sociometrically more acceptable than integrated EMR's to their non-EMR peers. Based upon the limited number of subjects involved, the integration model for retarded children appeared to have more salutary consequences than did the segregated approach to education. (Author - Abs. from Council for Exceptional Children.)

225. Gottlieb, J., Gampel, D.H. and Budoff, M. Classroom behavior of retarded children before and after reintegration into regular classes. Studies in learning potential, 3(49). Cambridge, Mass.: Research Institute for Educational Problems, 1973.

Special Class Placement/Social Adjustment/Peer Relationship/ Mentally Handicapped/Regular Class Placement

226. Gottlieb, J. and Budoff, M. Social acceptability of retarded children in nongraded schools differing in architecture. Studies in learning potential, 2(28). Cambridge, Mass.: Research Institute for Educational Problems, 1972, ED062748.

Mentally Handicapped/Peer Relationship/Regular Class Placement/ Special Class Placement/Physical Facilities

The social position of integrated and segregated educable mentally handicapped (EMR) children in a traditional school building was compared to that of EMR children in a non-interior-wall school. The results indicated that while EMR children in the unwalled school were known more often by their non-EMR peers, they were not chosen as friends more often. Retarded children in the unwalled school were rejected more often than retarded children in the walled school. Also, integrated EMR children were rejected more than segregated EMR children. (For related studies, see also EC042062 and 042066.) (Author - Abs. from Council for Exceptional Children.)

227. Gottlieb, J. and Strichart, S. Social contact, reward acquisition and attitude change toward educable mental retardates. Studies in learning potential, 2(26). Cambridge, Mass.: Research Institute for Educational Problems, 1971, ED058708.

Mentally Handicapped/Student Attitudes/Peer Relationships/Social Adjustment

To determine whether social contact (forced versus voluntary) and reward acquisition (winning versus not winning) were differentially effective in influencing positive attitude change toward educable mentally retarded children (EMR's), 68 non-EMR males in the fourth through sixth grades were asked to select either a same-sex EMR or non-EMR as a partner for a bean-bag toss game to help them win a prize. Subjects were able to select the EMR voluntarily or were forced to do so by the experimenter. The game was rigged so the experimenter was able to manipulate winning and not winning the game. Baseline attitude data were collected two weeks prior to the experimental task (T-1), immediately following the task (T-2) and two weeks later (T-3). The results indicated that reward acquisition was more effective than

social contact on improving T-2 attitude scores, but that voluntary social contact was more effective in raising T-3 scores. The findings were discussed in terms of the desirability of integrating EMR's with non-EMR's. (Author - Abs. from Council for Exceptional Children.)

228. Halliday, C. The visually-impaired child: growth, learning, development--infancy to school age. 1970, ED038811.

Early Childhood Education/Self-Concept/Teaching Strategies/ Visually Handicapped/Multi-Handicapped

Addressed to both professionals and parents, the handbook delineates visual impairment and discusses child growth with reference to the visually handicapped. Development in the visually-impaired of self-care skills and along physical, social/personal, intellectual and emotional lines is described and contrasted to that of the normal child. Also, school readiness problems for visually and multi-handicapped children are discussed. Materials and services are considered and their sources listed.

229. Head Start: a child development program. Washington, D.C.: U.S. Department of Health, Education and Welfare, Office of Child Development, 1970.

Teaching Strategies/Cultural Influences/Parent Role/Supportive Services

230. Hewett, F.M., et al. The Santa Monica Project: demonstration and evaluation of an engineered classroom design for emotionally disturbed children in the public school; Phase Two: primary and secondary level. Final report. 1969, ED038809.

Behavioral Objectives/Learning Disabilities/Academic Adjustment/ Regular Class Placement/Special Class Placement

Following its initial year, an engineered classroom for educationally handicapped (EH) children was replicated and extended. Evaluation indicated that the program could effectively increase emphasis on reading and include both primary and secondary students. Reintegration in the regular classes for EH children could be done on both a gradual and compulsory basis; the difficulty was in accurately assessing a given child's readiness for limited or total reintegration. The pre-academic focus of the primary classes (ages six to eight) was validated in that a majority of subjects from the first year who had returned to regular classes were average or above in their functioning after one or two years in the program. Also, EH children in the engineered classrooms outdistanced children in regular EH classes and approached or exceeded

normal controls academically and behaviorally. Appendices describe the engineered classroom and its dissemination and provide a behavior problem checklist and instructions for a frequency count of deviant behavior. (Abs. from Council for Exceptional Children.)

231. Hodges, W.L., McCandless, B.R. and Spicker, H.H. Diagnostic teaching for preschool children. Reston, Va.: Council for Exceptional Children, 1971.

Curriculum/Early Identification/Diagnostic-Prescriptive Teaching

232. Hodges, W.L., et al. The development and evaluation of a diagnostically-based curriculum for preschool psycho-socially deprived children. Final report. Bloomington, Indiana: Indiana University, School of Education, 1967, ED021948.

Mentally Handicapped/Culturally Disadvantaged/Curriculum/ Social Adjustment/Academic Adjustment

A study investigated the effectiveness of a one-year diagnostic preschool curriculum in improving regular school adjustment and achievement of 142 psychosocially deprived children (age 5, IQ's of 53 to 85). In each of three years, approximately 15 children were placed into an experimental preschool, a kindergarten contrast, or an at-home contrast group. Curriculum procedures were designed to remedy specifically-diagnosed deficits in the areas of intelligence, language, motor and social development. By the end of the treatment year, the experimental groups ranked significantly higher than the contrast groups in all of the areas named above. Follow-up study through the second grade for the first-year group and through the first grade for the second-year group indicated that the groups no longer differed significantly in any area except that of social development, which continued to be higher for the experimental groups. School academic achievement appeared not to be related to overall IQ change, but rather to specific intellectual processes that contributed to the IQ change; that is, if children made gains on items related to memory, vocabulary and motor development, the prognosis for their first grade academic success was better than if they made gains on items related to concept formation and abstract reasoning. (Author/JD - Abs. from Council for Exceptional Children.)

233. Johnson, D.J. The child as an integrating organism. Presented at a symposium of the New Jersey Association for Brain Injured Children, East Orange, May 1968, ED027687.

Learning Disabilities/Screening - Early Identification/Teaching Strategies/Self-Concept

The lack of integration in children with learning disabilities is discussed, and the need presented for early identification and special education. Recommendations are made for times for screening and areas of learning to be assessed from kindergarten through high school. Observation of behavior in preschool children in the realms of attention, social perception, auditory behavior (both receptive and expressive), visual perception and memory, and motor coordination is suggested as a means for teachers to identify and remediate problems; methods for observing are given. Deficient learning in these areas is mentioned: body image disturbances, time orientation and pre-number concepts. An appendix contains a form for the evaluation of preschool children. (RP - Abs. from Council for Exceptional Children.)

234. Johnston, W. A study to determine teacher attitude toward teaching special children with regular children. ED065950.

Regular Class Placement/Teacher Attitudes

An investigation to determine teacher attitudes toward regular class placement for handicapped chidlren included a Likert-scale opinionnaire, eight personal contacts with teachers and four observations. Of the 81 percent return on the opinionnaire, 55 percent of the teachers agreed that the special child had difficulty adjusting socially (much easier for mentally handicapped than for emotionally disturbed or learning disabled), but 77 percent agreed that the special child did better academically in the regular classroom than in the self-contained classroom. All agreed that progress of the regular class program was not impeded by the presence of special students. Only 27 percent of the teachers knew where to find materials on or for special students. Most teachers stated that they were willing to take special students into their class, if resource teachers would be available.

235. Jones, J.W. The visually handicapped child at home and school. (DHEW Publication No. (OE) 35045-68). Washington, D.C.: U.S. Government Printing Office, 1968.

Visually Handicapped/Community Attitude/Family Relationship/ Parent Role/Teacher Attitudes/Special Class Placement/Regular Class Placement/Academic Adjustment/Assessment Techniques

236. Jordan, J.B. and Dailey, R.F. Not all little wagons are red: the exceptional child's early years. Reston, Va.: Council for Exceptional Children, 1973.

Special Class Placement/Early Childhood Education/Early Identification/Teacher Training/Teaching Strategies/Regular Class Placement

In each field of knowledge, there are 10 to 20 leaders who constitute an "invisible college" from which all new information and emerging procedures emanate or pass. The field of early childhood education has at least 13 such leaders who have an internal system of communication by which they are kept abreast of intervention research, curriculum development, personnel training and program evaluation. The Council for Exceptional Children assembled this invisible college in San Antonio, Texas, in January 1972, for a conference on early childhood education and the exceptional child. This book, a product of that conference, is directed toward administrators, program developers and teachers involved in early childhood programs. The book strives to represent a diversity of acceptable approaches to early childhood education; hence, the book's title. The book is divided into 14 chapters, each based on the presentation of the participants in the conference, and organized into five headings: 1. rationale and historical perspective for early intervention; 2. identification of children needing special help; 3. program models and resource materials; 4. training of personnel; and 5. initiating and implementing change. Also included are a foreword by Merle B. Karnes, Conference Chairperson, and key portions of the discussions.

237. Jordan, T.E., et al. Recommendations for research concerning the education of young handicapped children: a report from the National Program on Early Childhood Education (CEMREL) to the Bureau of Education of the Handicapped. 10-2-0030, 1971.

Early Childhood Education/Teacher Training

This document explores three main questions: 1. What needs exist in the area of inservice training for young handicapped children? 2. What pedagogies should prevail in early education for young handicapped children? 3. What can be learned about research priorities from personnel in the BEH-sponsored network of centers for early education?

Except for the section on insevice training written by Ernest Gotts, most of the recommendations are based on letters returned by the personnel in the BEH network.

Comment: Sparse and general. Question: Did the practitioners and academicians who responded to CEMREL's request for information realize that their letters would virtually be the report?

238. Kaufman, M.J., Semmel, M.I. and Agard, J.A. Project Prime: programed re-entry into mainstream education. Washington, D.C.: Department of Health, Education and Welfare, Office of Education, 1974.

Labeling/Assessment Techniques/Regular Class Placement

239. Kreinberg, N. and Chow, S.H.L. (eds.). Configurations of change: the integration of mildly handicapped children into the regular classroom. San Francisco: Far West Laboratory for Educational Research and Development, 1973.

Mentally Handicapped/Teacher Training/Educational Planning/ Regular Class Placement

This document discusses the concept of advocacy, advocacy programs, roles and strategies for individualization, and the concept and system of accountability.

240. Lynch, W.W. and Ames, C. A comparison of teachers' cognitive demands in special EMR and regular elementary classes. Final report. 1972, ED067809.

Mentally Handicapped/Special Class Placement

The study compared the cognitively-oriented teacher-pupil interactions observed in a sample of 10 intermediate special classes for educable mentally retarded children with those observed in 10 regular third grade classes in the same schools. Examined were differences between samples in the rate of interaction, cognitive level and distribution of opportunities among individual pupils, as well as the relationship of the teacher's cognitive demands on individuals to the teacher's evaluative judgment of those pupils. The observation instrument was the Individual Cognitive Demand Schedule, by which observers code each instructional interchange between the teacher and an individual pupil. Data showed no significant differences between the special classes and the third grade classes on any cognitive demand indexes. Differences were found in the tendency to differentiate between pupils by level of achievement, with the third grade teachers showing a marked tendency to favor those pupils whom they judged to be their better pupils. (Abs. from ERIC - Early Childhood Education Project.)

241. Mann, P.H. (ed.). Mainstream special education: issues and perspectives. Reston, Va.: Council for Exceptional Children.

Regular Class Placement/Curriculum

Proceedings of the University of Miami Conference on Special Education in Great Cities were sponsored by BEH and centered around three issues:

1. The right to education for all exceptional children;
2. The training needs of regular educators;
3. The "three D's" problem: decategorization, declassification and desegregation.

The contributors discussed programs and systems they had developed that had been successful in dealing with the above-listed areas of concern.

Especially interesting is the chapter on CARE (Computerized Assisted Renewal Education), a mobile computerized curriculum for students from preschool through secondary school (pp. 119-132).

Comment: Most of the articles were not specific, but they discussed the general goals of various programs and mentioned the need for three "L's" (leverage, legislation and litigation) to achieve the goals of mainstreaming.

242. McHugh, M.F. (ed.). Proceedings of the Fourth International Seminar on Special Education, Cork, Ireland, September 1969. New York: International Society for Rehabilitation of the Disabled, 1969, ED044870.

Screening - Early Identification/Early Childhood Education

Proceedings of the Fourth International Seminar on Special Education (Cork, Ireland, September 8-12, 1969) contain papers relating to the following themes: special education personnel, identification of the handicapped, general aspects of early education, special education methods, early education programs for the mentally handicapped, and early education programs for children with sensory and motor handicaps. Also included are the program schedule, the opening and concluding addresses, a list of seminar participants, and an author and title index to the 25 papers. (Abs. from Council for Exceptional Children.)

243. Myers, W.A. Learning systems for preschool physically handicapped children: a training program. 1971, ED061688.

Early Childhood Education/Educational Planning/Physically Handicapped

The monograph discusses the establishment of a basic learning philosophy by staff involved in educating preschool physically handicapped children. Focused on as important topics to be considered in the formulation of a basic philosophy are communication systems and educational goals and procedures as they relate to all personnel involved. The establishment of sound educational teaching systems (procedures) is discussed within the context of learning theory. Hilgard (1956) is often cited, relative to basic learning philosophy. Particular learning needs of the physically handicapped are pointed out. It is concluded that systems of communication, goal setting, teaching

procedure and specific characteristics of crippled children must be interwoven to design appropriate educational approaches. A chart is presented, outlining a possible training approach for the education of teachers working with handicapped children. (Abs. from ERIC - Early Childhood Education Project.)

244. Nazzard, J. Second dimension: special education administrators view the field. Reston, Va.: Council for Exceptional Children, 1973, ED073585.

Administrator Attitudes/Teaching Strategies

Reported were the results of a telephone interview survey of all the state directors of special education, the director of special education of the District of Columbia, and 40 administrators of local districts which considered topics such as current problems and issues, outstanding programs, personnel training, identification and diagnosis of children, and program evaluation. Seen as the most controversial issue was mainstreaming and the labeling or categorizing of disabilities. Effectiveness of programs was the area most frequently given to be of highest research priority. Finding well-trained, competent staff was reported to be the most difficult problem of special education administrators. Approximately half of the state directors reported that 50 percent or more of exceptional children were being served, while six state directors thought that less than 25 percent were being served. Thirty-five state directors cited emotionally disturbed children as being the most difficult for which to program. (DB - Abs. from Council for Exceptional Children.)

245. Paige, M. (ed.). The First Pacific Forum on Mental Retardation, Honolulu, Hawaii, September/October 1971. Washington, D.C.: President's Committee on Mental Retardation, 1971, EC031763.

Mentally Handicapped/Early Identification/Educational Planning

The report includes condensations of speeches and papers given at the first Pacific Forum on Mental Retardation. Forum format was built around four professionals from as many countries, presenting challenges encountered within the four successive life stages: prenatal and infancy, early childhood, school-age and adulthood. Challenge papers concerned, respectively, prevention of retardation, risk determination and amelioration of suggested or detected early signs of developmental deficiences, providing relevant learning experiences to the handicapped, and programing to serve the adult retarded as an integral part of today's complex and competitive society. Two respondents reply to each of the four presentations. Also included are summaries from the concurrent work groups, in which delegates responded to the challenges. (KW - Abs. from Council for Exceptional Children.)

246. Project Child. Final report. Pitman, N.J.: Educational Improvement Center, 1972, ED064852.

Learning Disabilities/Early Identification/Parent Role

Project Child was explained to be funded under the Elementary and Secondary Education Act Title III, and was described to be a regional model demonstration program for the identification of preschool handicapped children, especially those with learning disabilities. Primary goals of the project were reported to be stimulation of parents and the public to realize the potential of preschool screening, the development of better screening devices, and identification of exceptional children in preschool population to facilitate helping them before they enter school. Project Child was then explained to be drafted as a three-phase, three-year project: the phases involved collection of data about exceptional children from parents in eight counties of southern New Jersey, establishment of a demonstration program, and development of a regional master plan. Analysis of data showed an overall prevalency rate of 15.1 percent of children with potential learning problems. Charts provided handicapping data for each of the eight counties. Then reviewed were follow-up projects, such as interviews with school superintendents, discussions with parents, an evaluation questionnaire, and a regional co-op project. It was concluded that the project served to make the public more aware of its handicapped populations and of the necessity of the educational system to serve all its children. (CB - Abs. from Council for Exceptional Children.)

247. Project Genesis: preschool diagnosis and programing. St. Clair Shores, Mich.: Lakeview Public Schools, Office of the Administrator, 1968, EC011666.

Early Identification/Emotionally Disturbed/Mentally Handicapped/Physically Handicapped/Speech Handicapped/Visually Handicapped/Learning Disabilities/Legislation

The introduction of a project designed to evaluate children for potential learning problems before they enter kindergarten lists additional objectives and the results of screening preschool children. Post-screening planning for each child, development of a workshop to prepare programers, presentations for parent and faculty education, and recommendations are discussed. A description of pilot programs in two school districts includes the scope, educational facilities and services in the communities, diagnostic needs and finances. The areas of disability to be considered are the following: learning disorders, including motor, perceptual and conceptual problems; mental retardation;

emotional disorders; speech and language disorders; inadequate experiential backgrounds; social incompetencies; and physical disabilities. Also treated are services to children, parents and teachers; follow-up calls, procedures and staff role at the clinic; and program planning, including personnel and staff roles, meetings, fund requests, consultants, Federal aid, and related services and activities involved in the program development. The participation of non-public school children in the program, evaluation methods, dissemination of information, and professional personnel qualifications and responsibilities are described. (RP - Abs. from Council for Exceptional Children.)

248. Pugmire, D.J. Methods of classroom integration and peer acceptance of the emotionally handicapped child. Unpublished dissertation, College of Education, University of Maryland, 1973.

Regular Class Placement/Self-Concept/Peer Relationships/Emotionally Disturbed

This study was conducted to determine the relationship between peer acceptance of emotionally handicapped children and the process of reintegration from a special education unit into the regular classroom, using three methods of integration (totally integrated, crisis group, and partially integrated groups). The study involved 18 subjects enrolled in third to sixth grade. The findings were that neither peer acceptance nor perceived peer acceptance was influenced by method of reintegration. (Note: the author points out the important role of the teacher in establishing the climate of acceptance in the classroom.) The study was limited by its small sample size. (The test used was the Cunningham Classroom Social Distance Scale.)

249. Reaching the preschool handicapped child. Albany, N.Y.: New York State Education Department, Bureau for Handicapped Children, 1972, ED069086.

Diagnostic-Prescriptive Teaching/Early Childhood Education/ Screening - Early Identification/Teaching Strategies

The proceedings of a special study institute on the preschool handicapped child include staff and participant lists, opening and closing remarks, and six papers. Topics discussed in the papers include teacher clues for identifying learning disabled students, directions for teacher identification of speech and hearing handicaps, the concept of classification and its integration into a preschool curriculum, prescriptive physical education, prescriptive (diagnostic) teaching, and educational materials. Sources and prices are given in a list of

professional books, children's library books, instructional materials and aids, films and filmstrips, and tapes and records appropriate for use with preschool handicapped children. (Abs. from Council for Exceptional Children.)

250. Reynolds, M.C. and Davis, M.D. (eds.). Exceptional children in regular classrooms. Minneapolis: U.S. Office of Education, Bureau for Educational Personnel Development, Grant OEG-0-9-336005(725), 1972.

Individualized Instruction/Teacher Training/Modeling/Regular Class Placement

Fourteen essays concerned with strategies for improving regular education services for handicapped children compose this document. They deal with the relationship of regular and special education, why and how to integrate the two systems, and benefits and detriments of integration.

Particularly interesting is the chapter on "Handicapped Children in Regular School Settings: Four Suggested Models Using BEPD [Bureau of Educational Personnel Development] Funding," by John W. Melcher, which advocates the use of government funding for integration rather than for separate special education (pp. 84-87).

251. Sanford, A.R. Learning accomplishment profile. Washington, D.C.: U.S. Office of Education, Bureau of Education for the Handicapped, Chapel Hill Training-Outreach Project.

Teaching Strategies/Diagnostic-Prescriptive Teaching/Self-Concept

252. Savitz, R.A. Vision screening of the preschool child. 1964, ED012120.

Diagnostic-Prescriptive Teaching/Visually Handicapped

Using a sample of 94 children (31 to 54 months old), this study compared eight vision screening procedures for young children in their ability to test for several visual functions and preference among them by children. The subjects were originally tested using the eight screening tests and, six months later, 40 of the children were retested for changes in visual acuity and eye dominance during the interim period. Results indicated that the relative screening ability of the procedures was undetermined for the visual functions of visual acuity, muscle balance and color preference due to non-testability of significant numbers of the subjects. The results indicated that eye dominance could

be established. The conclusion suggests that preschool children 30 months old and over can be screened, although 50 percent may be nonstable. A bibliography of 120 items is included. (Abs. from ERIC - Early Childhood Education Project.)

253. Schurr, K.T. and Brookover, W.B. The effect of special class placement on the self-concept of ability of the educable mentally retarded child. East Lansing, Mich.: College of Education, Michigan State University, 1967, ED027658.

Mentally Handicapped/Self-Concept/Student Attitudes/Regular Class Placement/Peer Relationships/Academic Adjustment

To investigate change in the general self-concept of ability of educable mentally retarded special class students, four equally-spaced interviews were conducted with 51 students (mean age 11.63 years) over a two-year period. Pupils answered questions about their academic ability from the general self-concept of ability scale; scores showed an ascending linear trend over the last 1-1/2 years of their placement in a special class, while those reassigned to the regular classes all declined in self-concept of ability. Special class students did not significantly increase in their awareness that, according to others' definitions, they were failures. The students had a more negative orientation to the special class during their second year (P less than .05), but there was no significant change in academic aspirations. Special class placement was found to have a positive effect on the children's self-concept of ability, which was based on self-comparison with class peers. Students may have internalized the negative attitudes of others about the special class and not about their ability. (LE - Abs. from Council for Exceptional Children.)

254. Schwartz, L., et al. Innovative non-categorical interrelated projects in the education of the handicapped. Proceedings of The Special Study Institute, Washington, October 1971. Tallahassee, Fla.: College of Education, Florida State University, 1972, ED060609.

Regular Class Placement/Teacher Training

The majority of the conference reports on education of the handicapped focuses on regular class placement and teacher education. Presented concisely are 21 program proposal descriptions with funding source, project dates, objectives, philosophy, procedures and evaluation, and literature influencing the project. Representative projects concern special education in the regular classroom, a competency-based model training program, training programs for preparation of curriculum

specialists for exceptional children, training programs for both special education teachers and regular teachers to meet the needs of exceptional children, consulting teacher programs, and diagnostic and prescriptive teacher projects. Concluding the proceedings are short discussion summaries on process and product of change in education of the handicapped as they relate to colleges and universities, program evaluation, preschool, local school system, and State Department of Education. (CB - Abs. from Council for Exceptional Children.)

255. Semmel, M.I., et al. An exploratory study of the relationship between the training, experience and selected personality characteristics of teachers and the progress of trainable mentally handicapped children. Final report. Detroit: Wayne County Intermediate School District, 1969, ED040529.

Self-Concept/Social Adjustment/Mentally Handicapped/Teacher Attitudes

Data were obtained from surveying and testing 86 teachers and 979 trainable mentally handicapped (TMH) children. Results indicated that most teachers were married and had college degrees, but had only limited experience and no relationship outside the classroom with retarded children. Over a fourth were not certified. Most preferred to teach preschool or elementary school, were disturbed by behavior problems and lack of pupil response, and viewed patience, calmness and a sense of humor as the greatest teacher assets. They emphasized the development of social skills abilities in their pupils and regarded the goals of social skills and emotional maturity as the best-liked characteristics of their pupils. Most pupils in the 40-to-49 IQ range were judged capable of intelligible speech; mongoloids outnumbered brain-injured children; most pupils had been in the county programs for two years or less. Over half the pupils had no retarded siblings; most came from blue-collar families with the mother at home. Statistical analysis indicated that the vast majority of teacher variables were unrelated to pupil growth as measured by the Cain Levine Social Competency Scale. Six related studies are included. (JD - Abs. from Council for Exceptional Children.)

256. Sherrick, C.E., Haber, R.N., Wickelgren, W.A., Suppes, P., Lenneberg, E.H. and Long, B.S., Douglas, V.I., Baldwin, C.P. and A.L., Swets, J.A. and Elliott, L.L. (eds.). Psychology and the handicapped child. (DHEW Publication No. (OE) 73-05000). Washington, D.C.: U.S. Government Printing Office, 1974.

Social Adjustment/Behavioral Objectives/Academic Adjustment

257. Special class placement - a continuing debate: papers presented at the 48th Annual International Convention of the Council for Exceptional Children. Reston, Va.: Council for Exceptional Children, 1970, ED039383.

Mentally Handicapped/Regular Class Placement/Educational Planning

The report of the proceedings of the 1970 Convention of the Council for Exceptional Children includes papers on the arguments for and against special class placement. Discussions concern themselves with love of life, truth, and others, by Matt Trippe, the efficacy of special placement for educable mentally handicapped children, by John W. Kidd, and the destructivess of special placement, by Tony C. Milazzo. Additional speeches describe the efficacy of special placement for the educable mentally handicapped, by Roger Reger, and the prospects of the mentally handicapped for the future, by Donald F. Sellin. (JM - Abs. from Council for Exceptional Children.)

258. State of the art: where are we in learning disabilities? ACLD and CANHC Publications, 1974.

Learning Disability/Legislation/Individualized Instruction/ Assessment Techniques

At the Second Western Regional Conference, sponsored by the Association for Children with Learning Disabilities and the California Association for Neurologically-Handicapped Children on February 3, 1973, panel presentations were made by four specialists in the field of learning disabilities. Samuel A. Kirk presents the legislative background that led to specific education for children with learning disabilities, an explanation of the definition of learning disability, and a warning about neglecting the severely handicapped learning disability children in favor of those with mild learning disabilities. Richard L. Masland gives a brief review of articles related to the medical aspects of learning disabilities and emphasizes that many learning problems can be recognized pre-kindergarten by the family doctor, who can refer the child for preschool remediation. Jeanne McCarthy emphasizes that the most important aspect in the education of learning disabled children is to provide a continuum of services, despite the cost, so that each child can be reached on an individual basis. Charles R. Strother gives a review of the psychological history of learning disabilities and a summary of present research by cognitive psychologists. He believes in the interaction of cognitive processes, skill development and academic achievement, and stresses the need to develop tests to assess cognitive processes in order that the specific disabilities can be identified, classified and remediated.

259. Stearns, M.S. Report on preschool programs: the effects of preschool programs on disadvantaged children and their families. (DHEW Publication No. (OCD) 72-27). Washington, D.C.: Department of Health, Education and Welfare, Office of Child Development, 1971.

Early Childhood Education/Culturally Disadvantaged

This document is an examination of the written evidence on the effects of preschool programs on disadvantaged children and their families. Findings were reviewed to determine whether they contribute to a justification for continued support of Head Start Title I government-funded preschool programs.

The major findings include: 1. Disadvantaged children who attend formal preschool programs show greater measured increases on standardized intelligence test scores than do comparable children who do not attend these classes; 2. It cannot be determined how much of that change represents development of intellectual capability and how much represents other factors, e.g., learning to take tests, greater self-confidence, familiarity with different adults, etc.; 3. Large-scale public programs have generally produced smaller changes in measured intellectual ability than have smaller, well-designed and expertly-staffed programs.

Comment: A clear and thorough overview of the literature.

260. Teaching children with learning disabilities. Johnstown, Pa.: Mafex Associates, Inc., 1964, EC011846.

Learning Disabilities/Screening - Early Identification/Regular Class Placement/Teaching Strategies

Directed to the classroom teacher, this report describes the six-year-old child with learning disabilities as he enters the classroom; his brain injury, nervous system development and self-concept are discussed. Educational diagnosis is considered in terms of psychological and educational characteristics and identification in kindergarten. Teaching methods to facilitate learning presented involve reduction of space and distracting stimuli, structure of the educational program (school-day activities and admission and transfer of pupils), and increased stimuli of learning materials. Also described are teacher selection and characteristics, parent-teacher contacts, and supportive help. (LE - Abs. from Council for Exceptional Children.)

261. The implications of recent research in early child development for special education: proceedings of the Special Study Institute, Nyack, New York, November/December 1973. Albany, N.Y.: New York State Education Department, Bureau for Handicapped Children.

Early Childhood Education/Academic Adjustment/Social Adjustment

This document is a summary of interactions that took place at a three-day conference bringing researchers and special educators together in Nyack, New York, in November 1973. Stated goals of the conference were to make the participants more knowledgeable about: 1. recent research findings; 2. the process of translating research findings into educational implications; and 3. the implications of recent research for the education of young handicapped children. It was also hoped that the dialogue initiated would be reflected in the future work-life of the participants. There were three formal presentations and four on-going area seminars. The presentations were: "New Information about Child Development and Learning from Birth through Age Six," by Dr. Robert B. McCall, of the Fels Research Institute; "The Process of Translating Research into Implications for Practice," by Dr. Patrick C. Lee, of Columbia University; "What's Different About the Handicapped?", by Dr. Shirley Cohen, of Hunter College, and panel. The four on-going seminars were in "Conceptual Development," "Language Development," "Social and Emotional Development," and "Perceptual Development."

262. Thurstone, T.G. An evaluation of educating mentally handicapped children in special classes and regular classes. Chapel Hill: School of Education, North Carolina University, 1959, ED002798.

Academic Adjustment/Social Adjustment/Mentally Handicapped/Regular Class Placement

The progress of young mental retardates in regular classrooms was evaluated and compared with that of their peers in special classes. Common problems were studied in a large number of different school environments, including rural schools and large and small-city school units. When the study was concluded and all data were analyzed, overall social and physical progress seemed to favor the special classes. However, the results showed that the subjects did better academic work in a regular classroom than those who were placed in a special class. (JH - Abs. from Council for Exceptional Children.)

263. Towne, R.C. and Joiner, L.M. The effect of special class placement on the self-concept of ability of the educable mentally retarded child. East Lansing, Mich.: College of Education, Michigan State University, 1966, ED024160.

Parent Attitudes/Academic Adjustment/Social Adjustment/Self-Concept/Mentally Handicapped/Student Attitudes

The effect of special class placement on the self-concept of ability was studied in 62 educable mentally handicapped students (mean age 11.6 years). Six observations were made in a time design series using scales of self-concept of ability and academic aspirations and expectations, and a class evaluation questionnaire. (JD - Abs. from Council for Exceptional Children.)

264. Weintraub, F.J., Abeson, A.R. and Braddock, D.L. State law and education of handicapped children: issues and recommendations. Reston, Va.: Council for Exceptional Children, 1972, ED056452.

Legislation/Modeling

The examination of state law and the education of handicapped children is intended as a guide for persons seeking change in direction, a rationale and a model for statutory provisions for exceptional child education. Issues discussed relate specifically to the special legal provisions needed by handicapped children. Background information is presented, the current status of state law summarized, and recommendations presented on the following aspects of state law and exceptional child education: the right to an education, the handicapped population and definitions of such, identification and placement, administrative responsibility, planning and coordination of resources, finance, administrative structures and organization of school districts, educational services, private schools, teachers and other educational personnel, and facilities. Concluding the book is a comprehensive set of model statutory provisions intended to assist states wishing to revise or create laws relating to the education of the handicapped. The models are designed to be incorporated into the comprehensive school law applying to all children in a state. (Abs. from Council for Exceptional Children.)

265. Blackman, L.S. Research and the classroom: Mahomet and the mountain revisited. Exceptional Children, 1972, 39(3), 181-193.

Educational Planning

There has been a failure of the educational research enterprise to make a major impact on classroom practices. This is due, in part, to a difference in objectives between teachers and researchers. The teacher is focused on how two or three children in her class can be transformed from learning and behavior problems to learning and behavior models. Researchers want to design generalizable instructional programs which can be broadly disseminated if found promising by experimental evaluation.

Who, then, shall have authority over educational research - a new money and strategy National Institute of Education, a network of research and development centers, private enterprise? The author suggests teachers and, ultimately, students who are not learning. He puts forth a model which takes as its tasks the study and remediation of the single child.

The value system for this type of research holds that the important finding is the unique procedure which will work with a particular child. The generalization of an intervention procedure, when it ultimately occurs, will result from the accretion of a large number of one-subject case study experiments that have replicated the successful treatment procedure for a specifiable set of children's medical attributes. This is more a medical than a psychological research model. It will require new statistical procedures and political structures. If one-subject case study research seems cumbersome, large group experiments have a distinct disadvantage - a substantial percentage of children receive no benefits or are actually hindered by programs designed in this way. Consider a reading program for the mentally retarded in which 2/3 of the group with the new program are not being benefited or are being actively hindered by this program. Yet the researcher still says it is "significantly" better.

265a. Buros. O.K. (ed.). The seventh mental measurements handbook (2 vols.). Highland Park, N.Y.: The Gryphon Press, 1972.

266. De los Santos Mycue, E. (comp.) Young children with handicaps, Part I: Emotional disturbance and specific learning disabilities. An abstract bibliography. Urbana, Ill.: ERIC Clearinghouse on Early Childhood Education, 1973, ED0130039.

267. De los Santos Mycue, E. (comp.) Young children with handicaps, Part II: Physically handicapped. An abstract bibliography. Urbana, Ill.: ERIC Clearinghouse on Early Childhood Education, 1973, ED0130040.

268. De los Santos Mycue, E. (comp.) Young children with handicaps, Part III: Educable and trainable mentally handicapped. An abstract bibliography. Urbana, Ill.: ERIC Clearinghouse on Early Childhood Education, 1973, ED0130041.

269. De los Santos Mycue, E. (comp.) Young children with handicaps, Part IV: Resources: directories, newsletters, bibliographies, and general information. An abstract bibliography. Urbana, Ill.: ERIC Clearinghouse on Early Childhood Education, 1973, ED0130042.

269a. Deutsch, M. and Krauss, R.M. Theories in social psychology. New York: Basic Books, Inc., 1965.

270. Handicapped Children in Head Start Series. Utilizing resources in the handicapped services field: a directory for Head Start personnel. Reston, Va.: Council for Exceptional Children, 1974.

271. Identification and intervention of handicaps in early childhood: a selective bibliography. (Exceptional Child Bibliography Series No. 606). Reston, Va.: Council for Exceptional Children, 1973.

272. Johnson, G.O. and Blank, H.D. (eds.). Exceptional children research review. Reston, Va.: Council for Exceptional Children, 1968.

273. Levine, M. Scientific method and the adversary model: some preliminary thoughts. American Psychologist, 1974, 29(7), 661-677.

This article is devoted to some criticisms of the basic experimental method as it is used in social research. It stresses the importance of not relying on the evidence from one source of information or one form of report, but of using multiple, overlapping and intersecting indicators that mutually reinforce each other or shed light on the sources of variance.

274. Light, R.J. and Smith, P.V. Accumulating evidence: procedures for resolving contradictions among different research studies. Harvard Educational Review, 1971, 41(4), 429-471.

The authors point out that the classical statistical methods used in educational research procedures grew out of agricultural research. They remind us that there are significant differences between growing children and plants. "First, when combining studies in educational research, we must allow for an extensive battery of treatment by subject interactions that could be safely ignored in agricultural research. A treatment, when applied in an agricultural setting, can usually be evenly distributed over the plants. For example, when fertilizer is added to a field, we can generally assume that the individual intrates will not decide to lurk about the roots of selected pea plants in preference to others."

Similar assumptions, they go on to say, cannot be made about variables in a classroom. The "cluster approach" is their recommended method for combining studies in doing research reviews.

275. Light, R.J. and Smith, P.V. Choosing a future: strategies for designing and evaluating new programs. Harvard Educational Review, 1970, 40(1), 1-28.

275a. Lindzey, G. (ed.). Handbook of social psychology, Volume I. Cambridge, Mass.: Addison-Wesley Publishing Company, Inc., 1954.

276. Mackie, R.R. Chuckholes in the bumpy road from research to application. Paper delivered at the American Psychological Association Meetings, New Orleans, August, 1974.

The author advocates allocating a greater proportion of the research and development effort to studies that have "high application potential" -- to be used for changing or improving educational processes, rather than just for understanding them. This may imply a need for reevaluation of the criteria of judging scientific merit in the field of psychology.

277. Northcott, W.H. Reading list on integration. Volta Review, 1973, 75(1), 33-5, EC050830.

Hearing Handicapped/Regular Class Placement

Intended for parents and teachers is a reading list of approximately 60 articles on integration of hearing impaired children into regular public school programs, which includes articles published from 1964 through 1972. Listings usually include author, title, journal source and volume number, date, and page numbers. The list is arranged by various levels of education and includes preschool level (seven articles), elementary level (24 articles), secondary level (nine articles), and post-secondary level (17 articles). (DB) (Abs. from Council for Exceptional Children.)

278. O'Connell, D. (comp.) Multiply handicapped children: a bibliography. Urbana, Ill.: ERIC Clearinghouse on Early Childhood Education, 1973.

279. Suchman, E.A. Evaluative research: principles and practice in public service and social action programs. New York: Russell Sage Foundation, 1967.

This book provides an excellent introduction to and in-depth discussion of evaluative research, including research design, types of evaluation, the conduct of evaluative research, administration, and other issues.

279a. Webb, E.J., Campbell, D.T., Schwartz, R.D. and Secnrest, L. Unobtrusive measures: nonreactive research in the social sciences. Chicago: Rand McNally & Company, 1966.

VI. Dissertations

280. Aniello, V.A. Educational specifications pertinent to the design of an educational complex for preschool trainable mentally retarded children (Dissertation, Columbia University, 1973). Dissertation Abstracts International, 1974, 34(9), 5749A.

Physical Facilities/Mentally Handicapped

The author concludes "that awareness of environmental variables, such as thermal, acoustical, lighting, space and aesthetic environment effect on program is essential to the success of the program itself."

281. Jacobs, C.T. Comparison of teacher attitudes and certain other variables in three school settings for the educable mentally handicapped (Dissertation, Western Michigan University, 1974). Dissertation Abstracts International, 1974, 35(2), 911A.

Teacher Attitudes/Mentally Handicapped

Found that:

1. Teachers with positive attitudes toward teaching did not necessarily have positive attitudes toward EMH's and their own ability to teach them.

2. Teachers under 30 more positive in attitudes than those over 30.

3. Teachers who had completed most special education courses had best attitude.

4. Teachers with most experience had least favorable attitudes.

5. Teachers who had contact with EMH's had more positive attitude.

282. Lennington, H.L. A study of a teacher development program and change in teacher attitudes toward exceptional children (Dissertation, University of Houston, 1973). Dissertation Abstracts International, 1973 34(4), 1736A.

Teacher Attitudes/Teacher Training

The author determined that the Exceptional Child Opinionnaire was reliable for group measurement of attitudes of regular teachers toward exceptional children. Found no significant differences in attitudes after training.

283. Lovitt, E.T. Teacher acceptance of classroom integration of children with learning disabilities (Dissertation, Arizona State University, 1974). Dissertation Abstracts International, 1974, 34(8), 4930A.

Teacher Attitudes/Learning Disabled/Teacher Training

Inservice training workshop raises teachers' acceptance of classroom integration of L.D. children (using modification of Classroom Integration Inventory).

284. Rouse, B.G. A comparison of intellectual functioning, academic achievement and self-concept of mentally handicapped children in three types of classroom placement (Dissertation, Mississippi State University, 1973). Dissertation Abstracts International, 1974, 34(8), 4885A.

Mentally Handicapped/Special Class Placement/Regular Class Placement

Mentally handicapped children in regular classroom did better than those in self-contained or non-categorical classrooms on arithmetic and intellectual performance tests. (No significant difference on verbal intellectual functioning, reading achievement, spelling achievement or self-conceptualization.) (Ss = 66; 22 each, mostly black boys, rural.)

285. Walker, V.S. The efficacy of the resource room for educative mentally retarded children (Dissertation, Temple University, 1972). Dissertation Abstracts International, 1973, 34(4), 1743A.

Resource Room/Mentally Handicapped/Special Class Placement

Children in resource room program were significantly better academically and socially at each testing than their counterparts in special class.

VII. Presentations

286. Allen, E.K. The model preschool and the behavior modification model. Paper presented at the 50th Annual International Convention of the Council for Exceptional Children, Seattle, Washington, March 23, 1972.

Behavioral Objectives/Individualized Instruction/Teaching Strategies/ Early Childhood Education

287. Guralnick, M.J. Behavioral techniques for the control and development of the hyperactive child in the classroom. Presented as part of the symposium on "The Hyperactive Child" at the annual meeting of the American Psychological Association, Montreal, August, 1973.

Emotionally Disturbed Children/Teaching Strategies/Behavioral Objectives/Social Adjustment/Regular Class Placement

288. Haywood, C.H. Labeling: efficacy, evils, and caveats. Paper presented at "Choices On Our Conscience," an international symposium on human rights, retardation and research, sponsored by the Joseph P. Kennedy, Jr. Foundation, Washington, D.C., October 16, 1971.

Labeling/Mentally Handicapped/Social Adjustment/Self-Concept, Academic Adjustment

289. McCarthy, J. A legacy of service: a commitment to excellence. Exceptional child education: a dumping ground for all educational failures? Speech presented at the Annual Convention, Florida Federation of the Council for Exceptional Chrildren, February, 1972. ED077172.

Regular Class Placement/Special Class Placement/Teacher Training

After a brief review of some of the past horrors of the treatment of exceptional children, the author addresses herself to the present problems that exist in special education. The greatest problem exists in the lack of competent teachers who can individualize a program of learning so that each child, regardless of his specialized learning needs, can be challenged in the regular classroom. Unfortunately, most teachers, when they encounter an exceptional child, have no trouble in ridding themselves of a special problem by placing the child in a special class. Special educators and parents are guilty for letting this situation go unchecked. Administrators must also share in the guilt for letting incompetent teachers remain on their staffs and for failing to provide the needed books and materials for the competent teacher who tries to reach thirty different learning levels in a single classroom. To rectify the situation of unnecessary special class placement,

a three-point course of action is suggested: 1) public schools must become involved in the teacher-training process and suggest changes be made in university curriculum so that potential teachers graduate with the degree of competency necessary to perform successfully in the classroom; 2) public schools must be provided a viable means of removing a tenured teacher who is incompetent; and 3) more adequate inservice training programs need to be built into the educational system. Another major problem exists in special education because it becomes a catching ground for all students whose learning styles do not match the demands of the curriculum. Special educators must refuse to accept such students and instead place some of the responsibility for them on the regular classroom teacher and curriculum specialist. If special educators enforce such a policy, they can truly become resource personnel who design effective prescriptions and remediate deficits for the children with special needs, instead of running unnecessary self-contained programs which parallel the education of the normal child. In conclusion, six suggestions for action to correct the problem are presented for special educators: 1) become involved in diagnostic procedures; 2) refuse to accept special education as an alternative to regular class placement; 3) redefine handicap groups that truly need segregated classes; 4) become involved in future teacher training; 5) participate in attending, teaching, and writing inservice programs for special educators and regular classroom teachers; and 6) become involved in professional organizations that can work on the problems of teacher incompetency.

290. Mercer, J.R. The labeling process. Paper presented at "Choices On Our Conscience," an international symposium on human rights, retardation and research, sponsored by the Joseph P. Kennedy, Jr. Foundation, Washington, D.C., October 16, 1971.

Labeling/Community Attitudes/Special Class Placements/Mentally Handicapped/Regular Class Placements/Cultural Influences

291. Weintraub, F.J. Recent influences of law on the identification and placement of children in programs for the mentally retarded. Speech presented at the Convention on Placement of Children in Special Education Programs for the Mentally Retarded, Lake Arrowhead, California, March 1971, ED048685.

Early Identification/Legislation/Mentally Handicapped/Regular Class Placement

In discussing the recent legislative influences on the identification and placement of children in programs for the mentally handicapped, the author presents a brief overview of the development of the concept of special education as indicated by significant court rulings of the late nineteenth and early twentieth centuries. Major legal decisions of the past decade are described, relating to areas of state definitions of disability and eligibility, validity of placement (with particular emphasis on intelligence testing as a primary criterion), discriminatory placement of minority groups, parent rights, and ability grouping or tracking. The author also summarizes the implications of the cited cases in terms of testing, placement procedures, individual rights, and the trend of special education itself. (RD) (Abs. from Council for Exceptional Children.)

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